

The **AGRICULTURAL EDUCATION** *Magazine*

VOLUME 28

JULY, 1955

NUMBER 1

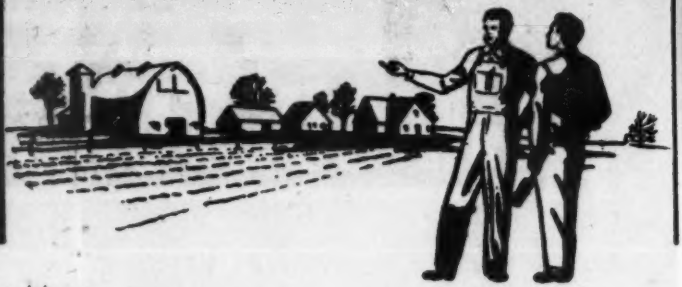


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Featuring—

**Improving On-farm
Instruction**

The Agricultural Education Magazine



A monthly magazine for teachers of agriculture. Managed by an editorial board chosen by the Agricultural Section of the American Vocational Association and published at cost by Interstate Printers and Publishers, Danville, Illinois.

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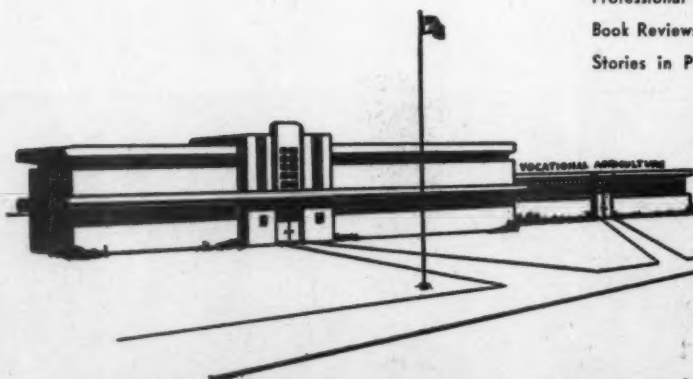
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Subscription price, \$2.00 per year, payable at the office of the Interstate Printers and Publishers, 19-27 N. Jackson St., Danville, Illinois. Foreign subscriptions, \$2.25. Single copies, 20 cents. In submitting subscriptions, designate by appropriate symbols new subscribers, renewals and changes in address. Contributions should be sent to the Special Editors or to the Editor. No advertising is accepted. Entered as second-class matter under Act of Congress, March 3, 1879, at the post office in Danville, Illinois.

Editorials

Guest Editorial...

JACK REYNOLDS, General Manager, Eastern States Exposition

The finest crop we have in our nation today is our youth. The young men and young women of today are being groomed to become the leaders of tomorrow. Therefore, it is important that their training be of the highest caliber.

Agriculture was perhaps one of the last of the professions, even though it is a highly skilled and most honorable profession, to adopt a program of formal training. This, in itself, is a strange phenomena—for the farmer is the pipeline through which the raw materials and finished products of the nation's economy are sent to the consumer.

The first "training ground" or classroom for many of today's successful and prosperous farmers was the state or county fair. It provided a show ring in which neighbor pitted his knowledge and his efforts against neighbor. It sparked the spirit of competition—and breeds and produce improved as a result—so that today we have some of the finest livestock the world has ever seen and some of the finest produce that ever graced the tables of a nation.

But the show ring was not enough. Trial and error proved to be a costly means of improving breeds and growing better crops. So the formal training came into being—and has come a long way since first being instituted.

The work being done by Vocational Agriculture teachers cannot be praised too highly. It will be the result of the training they give and the knowledge they impart to the young men and young women who take up farming as a career which will help, in great measure, to determine the advances to be made in our future economic life.

But again, formal training alone will not produce a successful farmer. He needs practice—and he still needs the show ring. For it is only by matching his results against those of others that he will learn whether he is succeeding.

Here, in the northeastern part of the country, we are proud of the part that the Eastern States Exposition plays in providing a rallying point—a great stage—upon which the final act of the harvest drama can be enacted.

Here the youth of the region can see the tangible results of their years of training. Here they can put into practice the theories they have been taught in the classroom. They can meet in competition with hundreds of others who have received training similar to their own and, by combining their talents and skills and exchanging information, come away richer in knowledge and experience.

Last year we were proud to play host to the more than 600 FFA youths who came to our West Springfield fair grounds to participate in dairy and livestock judging contests, in oratorical contests and in showmanship contests. This year, in addition, we expect to have twelve FFA exhibits, one from each of the states in this particular region, in our Youth Exhibit Building. And we feel that not only will the young people

(Continued on page 9)

Life may begin at forty, but so do heart attacks

C. S. ANDERSON, Teacher Education (retired)
Pennsylvania State University

As ever, it's an open season for the *Teacher's Coronary Club*, and a heart attack is the price of admission. Statistics* show that 70 per cent of all men teachers sooner or later qualify for membership. The figure may be even higher for teachers of Agriculture. They try so much harder to get into the organization, it seems. Slightly more than one-fourth become members and, at the same time, deceased alumni.

Would you really like to postpone the day? Or, perhaps be one of the lucky three in ten, and never rate an invitation to the Teacher's Coronary Club? Then here are some suggestions:

1. Dispel from your mind the erroneous notion that to be successful in your profession, your job must always have priority over your personal, your home, and your family considerations.
2. Think twice before you carry home that well-filled briefcase. Why spend your evening hours with the problems and worries of the school day! You will be a better teacher the next day, and better off physically and emotionally if you forget them.
3. Make it a firm rule not to traipse back to your school or your office to work in the evenings, or on Saturdays, Sundays and holidays.
4. Eat every meal (breakfast included) in an atmosphere of restful relaxation. Avoid mealtime conferences. They are not a way to kill two birds with one stone, but instead a way to kill one bird with two stones.
5. Plan and schedule your vacations, and adhere to the schedule as closely as you would for any engagement. Take all the vacation you have earned. Get completely away from your work-a-day world.
6. Have and enjoy one or more good hobbies. If I were hiring agricultural teachers, I would pass over the application of every man who could not prove that he had a consuming and abiding interest in at least one really worthwhile, relaxing hobby.
7. Keep up a participating interest in recreations. Fishing, hunting, golf, bowling, billiards, tennis, gardening, and a host of others yield high dividends when measured by a man's physical well being.
8. Be cautious and discriminating in accepting invitations to banquets, meetings, and membership on committees.
9. Do not keep on indefinitely assuming responsibility for extra-school activities, civic clubs, church leadership, and a long list of other community affairs. Learn to detect potential leaders, and then delegate responsibilities.

(Continued on page 9)

* Anderson, C. S. "Share Responsibility And Live Longer," *The Agricultural Education Magazine*, December, 1949.
Anderson, C. S. "Stay Home Nights And Live Longer," *The Agricultural Education Magazine*, October, 1951.

Some "why's" and "how's" to . . .

Make the most of farm visits

JAMES R. McKAY, Vo-Ag Instructor, Walla Walla, Washington

THE concept of "Learning to Do; Doing to Learn" is basic to the vocational education acts, to the Future Farmers of America, and to the purposes of farm visits.

First of all, we believe that we should establish our young men in farming, so we set up goals that fit each student under our supervision. In order to set up these goals, our young men take systematic instruction in the classroom covering such basic studies as Animal Husbandry, Crops and Soils, Farm Management, Marketing and Economics and Farm Shop. Under this systematic instruction we are starting the process of "learning to do." Then when we have this process in operation we make the first visit to the home farm with a very definite purpose in mind. Of a secondary nature, we have to answer the oft-repeated question "What should I have for a supervised farming program?" In our own minds we are going to set up a long-time farming program with the student of vocational agriculture and his parents. Before making this first visit we make sure the parents will be home. With the old traditional clipboard we gather up the boy and drive out to the farm. On the way there are numerous questions to which the boy eagerly supplies the answer, so by the time we arrive at the farm the real work is about to start. Some of the questions I like to get the answers to are: How many acres are there on the farm? What is grown on each of these acres? What is the major crop grown? What livestock do you have on the farm? Does your father own all this land? Do you own any livestock at the present time? Do you expect to take vocational agriculture for four years while you are in high school? How many brothers and sisters do you have? To what extent do your folks want you to develop your supervised farming program? Some of the answers to these questions are disappointing but I brace my feet and vow to make the best of the situation.

Get Familiar with the Farm

Upon arriving at the farm I ask the boy to show me around, so with my trusty clipboard we start our search. What am I looking for? I need the answers to a lot of questions on the physical features of the boy's home farm. All of these I jot down on my clipboard. Some of these features I am looking for are: What farm buildings are there? What is the condition of these buildings? What improvements can the boy take part in? What livestock equipment is on the farm? What farm machinery is on the farm? What is the condition of the farm machinery? Is the boy's father progressive? There are a great many more incidental points that I jot down for future reference. By the time we make the tour of the farm the boy's father is with us and by in-

direct means we end up in the kitchen of the farmhouse with a cup of coffee and I have been introduced to the boy's mother. After explaining that I am interested in getting the boy started in a supervised farming program, answering the father's question, "What do you think my son should have for a project?", and a dissertation on what the ideal four-year farming program for this boy should be, we are ready to get down to the business at hand. The next question is: "What should my son start with in order to do this?" Of course, by my questions to the boy on the way out to the farm I know what kind of livestock he owns, what kind of livestock he is interested in, and what kinds of crops are grown on the farm, so I suggest what I think would be an applicable start for him. After a few changes by the mother and father and a few additions by the boy, we arrive at a satisfactory conclusion. Then after agreeing to help the boy find these animals and agreeing to help get his certified seed for the land he just rented, I have paved the way for many more visits to the farm, with definite purposes in mind, i.e., help the boy reach the goal you have so diligently set before him, with the cooperation of his father and mother. And at each one of these future visits to his farm I make sure he is progressing, with as few mistakes as possible and as few sad moments of losing livestock as possible.

Basis for Classroom Instruction

Getting back to the classroom, I set up a learning process around this program to enable the boy to subscribe to his motto, "Learning to Do and Doing to Learn," thereby making the course in vocational agriculture as real for the boy as possible. Then, with the aid of my clipboard and the boy sitting beside me, I make a critical period chart for his livestock and his crops. During the first year, at least, I should make a visit to this boy's farm at these times to insure the boy's success. At this same time we also set up improvement projects and supplementary practices which the boy can and will do with the proper motivation.

I have set up the purposes of farm visits for a boy whose father is a full-time farmer. In this area we also have boys whose fathers are part-time farmers so I will also set up another situation covering visits to the part-time farmer's son. As a general rule, most of these boys live on small one-, two- or three-acre tracts and their fathers and mothers work at some urban occupation. Occasionally there are some of these boys who progress as far as the American Farmer degree in Future Farmer work. So, for simplicity, I will talk about the part-time farmer's son on a general plane.

Assisting Part-time Farm Boys

There are a great many supervised farming programs that can be fitted into these small acreages and the results can be very satisfactory. Another general rule that I follow is that most types of livestock are completely foreign to these boys, with the exception of the dairy cow. Therefore he is going to need a lot of guidance and visitations the first two years. Take him through a cycle of two years with a lot of help and consultation and I am sure it will pay off in the long run.

One important point to remember in the beginning of these supervised farming programs is to start the boy with what he is interested in, start him with a scope large enough to insure continued interest and be sure the boy sets a pattern of doing his chores in the morning and in the evening with regularity. In this way you are tying his home life into a pattern somewhat similar to the rituals of farm life.

Stimulating the Boy

Another purpose of my visits to this part-time farmer's son is to delve into his interests and find out how far along this road to becoming established in farming he will go. That takes a lot of doing, because quite often this boy's parents will not be as interested in farming as they should be to insure success of long-range planning. Therefore, if the boy proves to be genuinely interested, quite a bit of the fatherly load falls on my shoulders and I have to be available to him for solving his problems at all hours of the day or night.

Developing Skills

Most of the farm-reared boys, as covered in my first situation, learn most of their skills through actual experience of growing up on the farm. I will mention a few skills to clarify my point: castrating livestock, dehorning livestock, docking lambs, shearing sheep, controlling parasites, driving a truck, operating a tractor, operating other types of farm machinery, and culling poultry. However, in my experience, I have found that most boys just entering high school have not performed very many of these skills. Most of the farm boys are familiar with them to the extent that they have helped their father do them. The part-time farmer's son has not lived on his acreage long enough to become familiar with very many farm skills. Now, you as an agriculture instructor, are more often than not going to start this boy in some farming enterprise that is quite new to his experience. So in completing the cycle "Doing to Learn" my farm visits to this boy have to include the instruction in all farm skills that he is going to need to insure his success with his new venture. This, as you can see, will take quite a few farm visits. I assume, and I believe I am right, that this boy's father does not know how to do any of these things. Often times, this involves answering the sixty-four-dollar question and, as I think that seeing is believing, I tell the

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Ways and means of - - -

Supervising Farming Programs

CLAUDE E. RICHARD, Teacher Education,
Virginia Polytechnic Institute



Claude E. Richard

THE late Robert D. Maltby said there are three important purposes of visits for supervision of farming programs of vocational agricultural students: (1) to inspect (meaning to evaluate progress), (2) to instruct, and (3) to inspire. The successful visit usually

serves all three purposes. This is true whether the person is a high school student, young or adult farmer. A fourth purpose also should be added and that is for the purpose of informing the teacher concerning the home farm conditions so that he can better help his students discuss and solve their farm problems.

To carry out the above purposes or objectives the plan of supervision may be classified into two categories. Supervision without visitation and supervision through visitation.

How can supervision without visitation be provided?

Much can be done in supervising farming programs and stimulating interest without going to the farm. The following are some of the important ways a teacher may supervise without a direct visit to the farm:

1. Carefully developed farming program plans and satisfactory business agreements are the first steps in all supervision.
2. Good supervision is dependent upon and presupposes the carrying out of the following additional steps, much of which can be done in the classroom, on the street, at meetings, when students are at school and in other activities.

- a. Selling the idea of good supervised farming programs to members and to parents of high school boys.
- b. Selecting and planning the farming program on a long-time basis.
- c. Setting up satisfactory financial arrangements.
- d. Teaching jobs in seasonal sequence and giving emphasis to important phases of the farming programs.

- e. Planning jobs to be carried out on the home farm in sufficient detail that each member understands how they are to be done.
3. Talk with high school students during recess, before and after school, and at other suitable times.
4. Communicate with members by telephone, card, letter, radio or TV.
5. Send copies of helpful bulletins and other literature on needed topics.

Supervision without visitation can only supplement an active visitation program—never substitute for on-farm visitation.

Supervision Through Visitation

Preparation for visits is very important on the part of the teacher to save time and travel, and to make visits more effective. Some suggestions are as follows:

1. Study the member's farming program and schedule visits when something is being done, and when you can contribute something to the program. Just visiting on a routine

basis without an adequate plan doesn't accomplish much.

2. Communicate with the member to be sure he will be at home. Find out if you can bring something along that may be needed, such as, pruning equipment, vaccinating equipment, etc.
3. Plan to visit as many as practical while going into a neighborhood, particularly those with similar seasonal problems or activities.
4. Use your time in teaching more effectively by planning for group meetings for those members who have the same problems which can be solved on a group basis through group instruction and participation on some member's farm.

Some Suggestions for Effective On-Farm Visitation

1. Keep in mind the purposes for which you visit. To inspect, to instruct, and to inspire. Do what you have planned to do, *do it well*, and then move on.

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On-Farm Instruction.—Mr. Byron Rockwell, teacher of vocational agriculture, LaCrosse Vocational Agriculture Department instructing one of his young farmers in pruning pine trees in his timber lot.



Supervision without VISITATION is quite effective in some cases.—Mr. J. W. Obenshain, teacher of vocational agriculture of the Finckle vocational agriculture department, Virginia, assisting two members of his young farmer class to plan their farming programs.



Inspiring a student on a farm visitation.—Mr. W. B. Ramsey, teacher of vocational agriculture in the Charlotte Vocational Agriculture Department, Virginia, congratulating one of his young farmers for an excellent job of repair and maintenance of a grain drill.

One of the values of on-farm instruction

Businessmen See Value in Good Supervised Farming Programs

LOWELL N. COOK, Vo-Ag Instructor, Ripley, West Virginia

GOOD supervised farming programs which are challenging to the boy and give him a feeling of having accomplished something worthwhile in a financial way as well as giving him a moral uplifting are the foundation upon which a sound vocational agricultural program must be built in a community and upon which it must stand or fall. And like the Biblical passage which describes the untimely end of the house built upon the sands, so will the weak, ill-planned and sub-standard farming program result in the eroding away of the vocational agriculture program in the community.

Importance of Farming Programs

Many things can contribute to the growth of larger farming programs which are well adapted to the individual student and his home farm and certainly most teachers will agree that what motivates John to work harder and with more success than he ever has before may sometimes be the very thing which causes Tom to falter and lose interest. 'What is one man's meat may very well be another man's poison,' is an old saying and a stereotyped series of supervised farming programs laid out in the classroom miles away from the boys home farm can sometimes be a dangerous precedent to set. Boys, after all, are individuals coming from vastly different farms, different family backgrounds and opportunities, all types of social-economic levels and with varying degrees of intelligence, pride, skills and ambitions. However, unless the boy has been completely pampered by well meaning but ill advised parents or relatives, two goals which most of them seem to have in common are the desire to earn more money and to secure recognition. It is the latter of these ambitions which, it seems to me, offers several possibilities to teachers interested in building up the scope of their students' farming programs, securing better record keeping and assisting in carrying out a greater number of new and approved practices on the boys' home farms.

The first and probably the most important part of the FFA program of work is devoted to the improvement of the farming programs of its members. Great weight has been given to stimulating the pupil's interest in doing a better job and to help him get started in some of those things which not only will help the boy to become a successful farmer but which also will make of him a well rounded citizen in his community.

In promoting this highly rated objective, considerable weight has been given to the Foundation Awards of Star Farmer, Star Dairy Farmer, and in Farm Mechanics, Soil and Water Man-

agement and Electrification. It is the use of these awards as motivating factors with which we are concerned.

Local Resources Used

The Ripley FFA Chapter over the past few years has drawn considerable support from local businessmen, farm organizations, newspapers and educators through the development of rural youth leaders, the promotion of civic functions, community improvement and citizenship.

In the fall of 1954, several businessmen contacted the advisors of the Ripley FFA Chapter and discussed the possibility of establishing awards either in merchandise, plaques or trophies for those boys who had done outstanding work in various activities. This idea seemed to have considerable merit. Accordingly the Chapter officers approved the project and the plan was brought before the membership for consideration. After a thorough discussion the members voted overwhelmingly to present trophies through the cooperation of local banks, business leaders and merchants to the Chapter Foundation Award-winners.

Selecting the Awards

A committee of members visited these community leaders and helped select appropriate trophies for each of the Foundation Awards. These trophies were presented to the members who were judged to have done the best job in a given field by the supervised farming committee. This plan seems to have several advantages since it stimulates discussion of what makes up a good soil and water management program, to use one example, and focuses attention on the strong and weak points of the work the members are doing. It also calls attention to the different types and qualities of work and helps emphasize those practices which are definitely beneficial in comparison to others which may be more spectacular.

Another beneficial result of these local awards is the report given by the Chapter winner on what his practices have done for his home farm and how they have helped to increase the profits realized from his supervised farming program. It also clarifies such benefits as greater efficiency, safer operating conditions, more comfortable rural living and beautiful surroundings. Of course, these farms make ideal resources for field trips and a logical stopping place on an enterprise tour.

Improved Relationships

Since this idea was a spontaneous gesture of local business leaders who have been strong boosters of the vocational agriculture program in the com-

munity, some time was spent in discussing the Vo-Ag and FFA program with these people. Attempt was made to determine their reaction to the results of a vocational agriculture program in the county and to determine the benefits of vocational agriculture as seen by local people observing from the outside.

It was interesting to note that no single activity could be deemed responsible for the business leaders' interest in and support of the vocational agriculture program. Their opinions indicated that it was the sum of all the boys' activities. Some of their reasons for their support were:

1. The classroom work and the individual on-the-farm instruction teaches the boy better farming methods and the application of these new and approved practices tend to be reflected in a better farm and increased incomes for farm families.

2. Assuming responsibility at an early age for the completion of a good farming program teaches the boy the value of a dollar and the labor one must exert to get it. This results in the boy being willing to accept responsibility for his own welfare and for the betterment of his community.

3. Vocational agriculture as expressed in the FFA motto of "Learning to do" is valuable in promoting individual and group initiative and effort. It gives the boy the "know-how" to plan and accomplish a task.

4. Almost all of the business leaders expressed the opinion that the FFA activities in supervised farming provided an opportunity for rural youth leadership to thrive and prosper. This, they believe, is essential for the growth of a farm community.

5. The businessmen cited the progress made toward establishment in farming by many vocational agriculture students as evidence that the taxpayer was getting a dollar's worth of value for a dollar spent on school finance.

6. The leaders believed that establishment in farming by our farm youth was good insurance to prevent exporting our most valuable natural resource to the city or other communities.

7. Many businessmen expressed the belief that the training received in vocational agriculture in record keeping, leadership, development of initiative and the ability to put theory into practice would be very valuable to those boys who entered related industry, business or professional life.

8. And finally, it seemed to be the consensus of opinion among the business leaders of Ripley that they felt that they should provide for youth, who have tried to help themselves, a token of appreciation for work well done. □

Theme of the August Issue - -

"Serving the School and Community"

One of the major purposes of farm visits

Enlist the cooperation of parents

It helps to make instruction more vocational

ROBERT C. COFFIN, Teacher Education, Cornell University



Robert C. Coffin

AMONG the many purposes for making farm visits to which you as a teacher of vocational agriculture subscribe or have been exposed, none appears more challenging or more important than that of negotiating with parents, or a cooperating farmer, for the pupil

to share or assume responsibility for making the decisions involved in a real farm problem and carrying them out in practice on the home farm as part of his program of training for farming.

A re-examination of the above paragraph reveals that, before the purpose can be achieved, certain conditions of training should be evident: (1) a pupil expresses and maintains a sincere desire to train for farming, (2) the farm problems for which he seeks solutions should be connected with, and come from the entire farm, (3) an opportunity exists for the pupil to share or assume responsibility in making decisions, (4) the parents of the pupil understand how their pupil is trained for farming, and (5) parents are willing to grant or share managerial responsibility with their son. The extent to which these conditions are met will determine, to a large degree, the success you have in negotiating opportunities for your pupils to acquire farming competencies identified in their farming programs. Perhaps partial answers to questions asked by present and prospective teachers of vocational agriculture will bear out this point, and also explain what is meant by "negotiating" with parents.

Why Negotiate with Parents?

It has long been recognized that parents play a vital role in a pupil's training for farming. Their understanding of their boy, his interests, abilities, and needs, will assist you in planning a training program with the pupil. More specifically, negotiations with parents are desirable and essential for these reasons:

1. They act as guides or screens by which units of instruction may be selected for group instruction in the classroom.
2. They assure each pupil an opportunity to carry out the solution to the problem under consideration.
3. They serve as bases for action on the part of pupil, parents, and teacher.
4. They afford opportunities for pupils to become identified with real farm problems existing on the home farms.
5. They determine, in large part, the scope and content of each pupil's supervised farming program.

In a broader sense, negotiations with parents should be requisite to instruction because around this intimate relationship turns the aspirations of the pupil, the welfare of the farm, and the philosophy of the teacher.

Negotiate for What with Parents?

The actual responsibilities for which you seek opportunities for your pupils to have will, of course, be determined by the decisions identified by the pupils in analyzing their farm problems and by the degree to which your pupils are ready to assume the various responsibilities. For example, assume that the problem existing on the home farm

is one of "Selecting a Variety of Seed Oats to Plant This Spring." The specific negotiation becomes, then, one of arranging with the parents for the pupil (and other pupils studying the same problem) to share or assume responsibility for making the decision as to what variety of oats to plant and carrying out the decision in practice.

In addition, negotiations may be made for your pupils to have opportunities to acquire certain skills needed in the solutions of their farm problems. Here again, the pupil, teacher, and parents agree upon the degree of responsibility the pupil will have and the part assumed by the parents in providing instruction and evaluating the performance.

When to Negotiate with Parents?

The need and opportunity for negotiating with parents for pupils to assume responsibilities exists throughout the duration of each pupil's training program. However, there are certain critical times when every effort should be made to effect satisfactory arrangements among pupil, parents, and teacher with regard to training responsibilities. Among them are:

1. During the pre-vocational period when the prospective vocational agriculture pupil is experiencing supervised practices in farming. The involvement of the pupil in bona fide problems of the farm will guide him in making a sound decision as to his vocational choice.
2. During the initial period of the pupil's training program in vocational agriculture. It is very appropriate to identify the kind and extent of responsibilities which the pupil can share or assume throughout his period of training for farming. Parents should be encouraged to accept the responsibility of assisting the pupil and teacher in planning a program and to consider the "negotiations" proposed by the teacher.

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Pupil-parent-teacher planning during a farm visit identifies experiences and responsibilities needed by the pupil in his training for farming. The parents realize the importance of their son's training program to the efficient operation and management of the home farm. And the teacher recognizes units of instruction as a result of specific negotiations made with parents.



Pictures by H. L. Noakes

Negotiations are made with parents to provide opportunities for each pupil to share in the management of the total farm business. Pre-unit arrangements enabled this pupil to carry out his plan for feeding the home milking herd. The responsibilities assumed by the pupil in solving real farm problems constitute his individualized farming programs and the content of his classroom instruction.

To improve on-farm instruction, have - - -

Meaningful Purposes For Farm Visits

ROBERT J. LOUGHRY, Vo-Ag Instructor, Hickory, Penna.

MANY of us as vocational agriculture teachers are downright sloppy when we make farm visits. We would hesitate to accept work done by our students in a slipshod manner, yet we may become careless ourselves without realizing it. We jump in our cars, not even bothering to cross our fingers in hope of making a worthwhile contribution to the agriculture of our community or to the growth of our students, and we're off to call on whatever farm might please our fancy at the moment. Many of us do farm visitation work because it is expected of us or simply because it seems to be the easiest thing to do at the time. We neglect to study or to have purpose in our farm visitation work.

Farm visits should be among the most valuable tools of our agricultural education program in any community. If we expect to be effective in the profession of teaching vocational agriculture, we must know *why* we are making farm visits. We must arrive at the farms with goals in our minds, and we must be determined to fulfill those goals. After we have established definite purposes for farm visitation, we are much more likely to make our farm visits a positive force for a more effective program in agricultural education in our rural communities.

Purposes for farm visits may be grouped under four general areas according to their relationship with the department of vocational agriculture and the teacher. These areas include: *educational purposes, informational purposes, promotional purposes, and social purposes.*

Educational Purposes

Education should be the primary job of the vocational agriculture teacher; therefore, his first concern in farm visitation should be to fulfill his educational obligations. Opportunities for teaching will present themselves as follows:

1. The *home supervised farming program* will, in most cases be the area where the vocational agriculture teacher will have the greatest freedom in providing a program of practical education on the farm. Even this will vary from farm to farm, but with a healthy understanding among the teacher, parents and son from the beginning this medium will prove invaluable to the teacher. Not only will the boy be taught, but the parent will be quick to see the value of applying new and improved farm practices to his own farming operations. Other members of the community will be quick to see any improvements resulting from on-

the-farm instruction in the supervised farming programs.

2. The *complete farming program on the farm visited* usually will present opportunities for teaching during visitation if the teacher becomes skilled at shifting conversations, and in asking well-timed questions. It seems wise to mention that the teacher should not always volunteer information. Mostly, the teacher should await a request for information from the student or his parent when talking about the complete farming program since some farmers are very sensitive about what they consider to be their own private business. Certainly, every progressive teacher would be quick to acknowledge the value of using the whole farming program as opposed to a small phase of that business.
3. The *establishment of new information, techniques, and skills in agriculture* should certainly be one of the purposes for making farm visits. Yet this is the one area where the teacher will find the greatest friction and opposition. Anything new or different seems to arouse some degree of opposition among farmers. Most new information, techniques and skills must be integrated into the supervised farming programs of the boys, and the teacher should insist that this be done. The teacher will discover a few progressive adult farmers in the community who are eager to put into practice new ideas the vocational agriculture teacher has to offer. The teacher should take full advantage of such opportunities during visitation, but should be cautious not to over-burden any particular individual.
4. The teacher should take advantage of farm visitation to *stimulate interest in new phases of agriculture* of particular concern or adaptability to the community. The vocational agriculture teacher is one of the few people in the community with training in agricultural economics and management. This should give him greater insight into the value of certain new developments of economic importance to the farmer. He should feel obliged to educate the farmers in this respect, and what better opportunity will he have than when he is on the home farm where he is able to get an overall picture of the business.

Informational Purposes

Most of us want to make our educational program in vocational agriculture just as effective as we possibly can. There is a central focal point for the

program of study for each boy we visit right on the farm, but we should train ourselves to be aware of how and why we should use such information. We may get information during farm visits in the following ways:

1. The teacher of vocational agriculture can get a *clearer picture of the total agricultural program in the community* if he studies the complete farming programs on the farms he visits. If we are to make the program of study meaningful in our classrooms, we must meet the needs of the farms and the farmers in our communities. We will be better fitted to decide which phases should remain in our courses of study after we have visited and studied the home farms of the boys enrolled in the vocational agriculture course.
2. The teacher will want to *discover farmer opinion about current agricultural practices*. If a practice isn't being used in the community, there are bound to be sound reasons. It is the teacher's responsibility to discover what those reasons are and to try to determine their accuracy. By the same token, some farmers will have accepted new or advanced practices. The teacher will need to know the opinions of such farmers to help other farmers in the community.
3. Teachers should try to *discover farmer opinion about the course of study in vocational agriculture* and the program offered through Future Farmers of America. The vocational agriculture teacher, who is not in the actual business of farming, may be advancing ideas which are not practical. Who would be a more logical person to hold him in check than a farmer in the practical business of farming? Often minor adjustments, resulting from such positive criticism, will make the programs conducted by the vocational agriculture teacher much more meaningful and worthwhile.
4. An alert teacher will be quick to examine the *social and economic backgrounds of his students* through home farm visits. If we are to help students grow, we must discover where they are in their development at present. There is no better place to make such a discovery than on the home farm.
5. When making farm visits, the vocational agriculture teacher should *study the home farm facilities available in order to aid the boys in the development of their home supervised farming programs*, and to contribute toward their establishment in farming. This type of information will also contribute to the course of study, since the two are closely integrated.
6. During farm visitation, the teacher should be aware of the possibilities of using some particular phase or phases of the farming program on the farm visited for later *laboratory or field trip purposes*. This will give the teacher a better idea as to just

(Continued on page 12)

"Selling" your program

Through on-farm instruction

HAROLD W. BELLINGER, Vo-Ag Instructor, Van Hornesville, N. Y.



Harold W. Bellinger

AS we make renewed effort to increase the vocational aspects of our teaching it becomes more and more clear that we are primarily salesmen. We attempt to interest those junior high school students we feel can benefit from vocational instruction; we arrange

parent meetings to put across the farm training philosophy; we continually explain our program to guidance personnel and administrators—yet, even with all this, we often fall short of our goal of the truly vocational aspect we are striving for. To put across a learning-by-doing program we have a never-ending job of selling our philosophy to the cooperating farmer—who is usually the parent.

We may have introductory booklets, we may hold parent meetings, and use the FFA program to put our story across with varying degrees of success. We need and should use all of these techniques, for we are selling a product a good many pupils and parents are not very interested in buying. This may sound like heresy but it is nearer the truth than many of us care to admit publicly. There seems to be a considerable gap between a tentatively agreed upon training program and the actual carrying out of such a program by the pupil.

Necessity of Follow-up

From experience, it seems to me that a very important supplement to the previously mentioned selling techniques is the constant follow-up and review that can and should occur while carrying out on-farm instruction. Here is an opportunity to re-emphasize our vocational philosophy to parent and pupil alike. It seems strange that it is quite often easier to arrange for training opportunities with a cooperating farmer who is not also the parent.

If our on-farm instruction follows classroom activities and occurs when the pupil needs the extra help, we can actually demonstrate our philosophy to the parents. An example of this selling technique might involve dehorning calves or making soil tests following classroom instruction. Starting with simple problems such as these, which involve an obvious service to the farm business, is an excellent way to open the door for more complicated farm business problems later on. A good many farmers who are reluctant to let their sons change or make a farm business decision on their own, welcome a chance to have a soil test made or have their calves

dehorned. Here is a golden opportunity to clinch our sales talk. It is extremely important that we carry out such on-farm instruction and not leave the pupil with only classroom instruction to go by since a poor showing at this stage will not enhance our program to a reluctant parent.

New Problems are Identified

When we carry out on-farm instruction we have the very best opportunity to show the pupil logical problems that lie ahead, for most farm jobs are interrelated. Much more stimulus can be given to student planning when the pupil can actually see the problems that lie ahead. This is often not the case when such planning is carried out only in the classroom. If we accept the idea of a truly vocational farm training program that goes beyond instruction related only to pupil-owned projects, we must sell the parents and cooperating farmers on our philosophy of pupil responsibility. Continued discussion and planning should be an important part of on-farm instruction to keep the central idea of pupil responsibility in the forefront. Often farm visits and on-farm instruction are neglected for a number of reasons, insufficient time being one. We cannot put across the idea of vocational training without demonstrating on-farm instruction frequently and successfully.

If we start with units of instruction that give pupils opportunity to carry out activities which clearly tend to be of service to the farm business it helps illustrate our selling point. No farm visit is complete unless we talk with the cooperating farmer, discussing the instruction carried out and relating it to future planning and to the pupil's training program as a whole. If the parent has changed his mind about some of the pupil's program he previously agreed to, here is the opportunity to review philosophy and reguide the parent into cooperating not only with planning a training program for his son but also to point out more specifically the cooperating farmer's part of on-farm instruction. □

A forestry pamphlet, "In Your Service—The Work of Uncle Sam's Forest Rangers," and an attractive forestry poster have just been released for distribution. Teachers may obtain single copies free from the Office of Information, U. S. Forest Service, Dept. of Agr., Washington 25, D. C.



When the teacher gets out to the farm to assist the learner in putting the plan for the solution of a real farm problem into operation, he is almost certain to make real progress in "selling" his program to the parents or the cooperating farmer. Emmet Vanderburg, Vo-Ag instructor, Avoca, N. Y., is helping a student "follow through" on measuring feed for the dairy cows. (Picture Courtesy of Harold Noakes)

Guest Editorial

(Continued from page 3)

enjoy participating in the varied activities which the Exposition provides, but more important, they will learn at the same time.

It is our belief—and practice—that "youth must be served." It is one of the beliefs upon which the Eastern States Exposition was founded. It is one which will continue so long as there is an Eastern States Exposition. □

Life May Begin - - -

(Continued from page 3)

10. Take seriously the advice of well-informed physicians when they tell you that a normal man requires a nightly average of eight hours of sound, undisturbed sleep, if he is to keep his physical being in tone.

Life may begin at forty, but so do heart attacks. There is no curative. Control of nervous tensions is the great preventative. But you must start to do something about it, and do it now, if you are to eventually escape becoming just another statistic in the files of this mythical Teacher's Coronary Club. □

The Cover Picture

Taken from the top of Mt. Stgar Loaf, elevation 791 feet, in Deerfield, Mass., overlooking the Connecticut River. It is on farms such as these that the boys in the Vocational Agricultural Department of the Deerfield High School develop supervised farming programs around the growing of crops such as tobacco, onions, potatoes, and cucumbers.

(Photo courtesy of John H. Vondell, University of Massachusetts)

Donald Sanford, Jr., Jasper, Alabama, won the 1954 national FFA award in Farm Electrification. He received \$250 from the FFA Foundation. Regional awards of \$200 each went to Wayne Hughes, Knapp, Wisconsin; Donald Gehrmann, Wyoming, Delaware, and Rasmus Indreland, Harlowton, Montana.

Placement training for farm experience

Individual on-farm instruction takes on new aspects for these students

JESSE A. TAFT, Teacher Education, University of Massachusetts



Jesse A. Taft

SINCE the beginning of World War II, placement training has developed rapidly, and now has become the dominant type of a supervised program for the majority of students in Massachusetts' centers. Even prior to World War II, farm placement training was common in departments located in the more urban areas of the state. It has now spread to every center in the state. By placement, we refer to individuals working on a farm (commercial or school) for experience and pay away from home. Boys working on the home farm for the summer are not classified as being on placement. Today, the majority of Massachusetts students of vocational agriculture choose placement as the core of their farming program to satisfy the Supervised Farming Program requirement.

Role of Placement Training

In many Massachusetts centers, nearly one hundred per cent of the students rely on placement training without any other form of activity such as productive and improvement projects. This situa-

tion is due to a number of factors. With less farms, but larger farms, more and more of our students come from homes where farming is not conducted on a full-time basis. Not over ten per cent of the present student-enrollment are from homes where parents are engaged in farming on a full-time basis. Another reason is that the demand for hired farm workers, between April 1 and October 1, has been especially favorable for placement. Requests in many centers for students in vocational agriculture frequently exceed the supply of available boys.

For the year ending October 1, 1954, seventy-eight per cent of Massachusetts' three county school students used only placement to gain farm experience. However, in the high school centers, two out of every five boys satisfied the Smith-Hughes requirement by obtaining farm practice through summer placement only. The remaining sixty per cent, however, included placement to a very large degree, yet carried on some productive and/or improvement projects which make for a more desirable type of a farming program. The point is that it is not just the "village boy" who relies on placement training. In Massachusetts, nearly all boys include placement in their farming programs. The exception is a small group who live on farms where the parents are farming on a full-time

in farming than the small productive and improvement projects that have been common to most programs. Boys on placement are participating in full-scale farming where approved practices are more readily adopted. They learn good working habits. They know what a day's work is. They enjoy themselves, for they are using mechanized equipment which eliminates much of the drudgery. Practices observed and participated in will be not only man-sized, but also practical. These boys are under the supervision of the leading farmers, since it is usually the successful farmers that are in a position to employ hired help.

Financially the boy is better rewarded for his efforts from placement than by carrying out other programs. The Norfolk center reported a total of \$99,963 labor income for day pupils working for farmers during 1953-54. Contrast this with \$1,880 labor income reported by the same group from productive ownership projects.

In one of the state's most intensive agricultural areas, a high school department reported a labor income of \$600 per boy for one year. All labor income from farming was derived from placement except for one boy who carried a project of $1\frac{1}{2}$ acres of potatoes. His labor income was \$15. Which type of program would you undertake? Can you blame boys for choosing placement as a means of gaining farm experience and training?

Another high school center with 46 boys enrolled reported no projects undertaken during the school year. Yet, the total earnings from summer placement amounted to \$25,410.59 or \$552.40 labor income per boy. This is significant evidence as to why most boys select placement instead of a productive project which provides a relatively small remuneration. These illustrations are typical of what has taken place in Massachusetts.

Unless a boy has adequate facilities and finances for undertaking a productive project which is of sufficient scope to require most of his working day during the summer, it is doubtful that his training and experience will measure

TYPE OF SUPERVISED PRACTICE (Year Ending October 1, 1954) Massachusetts

	Students in High School Departments Percentage	Students In County Schools Percentage
A. Productive Enterprise Projects: Individuals enrolled in such projects only.....	7.70	1.30
B. Other Supervised Practice: Individuals enrolled for:		
1. Improvement projects only.....	0.50	0.22
2. Supplementary farm practice only.....	5.20	0.60
3. Placement for farm experience only.....	40.00	78.20
C. Productive Enterprise Project and Other Supervised Practice: Individuals enrolled in projects plus one or more forms of other supervised practice.....	40.10	16.80
D. Two or more forms of "Other Supervised Practice": Individuals without supervised practice	6.50 0.00	0.00 2.88
TOTAL ENROLLMENT.....	100.00	100.00

Value of Placement Training

Vo-Ag teachers in Massachusetts will agree that a good placement facility is much more desirable for training a boy

Discussing placement problems with the employer and the student. Genuine farm experiences obtained under full-scale farming conditions must be assured.



up to that received by a boy having the average placement opportunity.

Business-Like Procedures Must Be Adopted

Each supervisory visit should be purposeful. The teacher should use business-like devices in connection with his on-farm instruction. The goal of the teacher will often vary on each visit as the needs of the individual student will not be identical.

Teachers in Massachusetts have found it necessary to adopt such business-like forms and devices as follows:

1. Farm placement agreement forms
2. Skill sheets
3. Records and accounts
4. Employer's estimate of the boy on the job
5. Making a reputation

Farm Placement Agreement Forms—

This instrument covers a number of important items which concern the student, the parent, the employers, and the teacher. It covers such points requiring agreement as student's duties, work hours, wages, time off, church attendance, starting and ending dates. It is important that teachers do all in their power to place the right boy on the right job. A satisfied employer will lead to continued opportunities for other boys in the future. All four parties sign the agreement form.

Skill Sheets—A conference involving employer or his representative, teacher, and student is very desirable to take place preferably before the placement begins. It is the responsibility of the teacher to provide the employer and the student with a list of skills. This list will cover the enterprises conducted on the farm in which the student should gain farm experience. The lists become a focal point for discussion between all parties and result in an effective training program when followed. In Massachusetts the Vocational Division furnishes each center with skill sheets covering thirteen distinct enterprises.

Records and Accounts—Forms required are different for placement students than for students engaged full-time on their home farms with productive and improvement projects as the major core of the farming program.

The accounts must include daily hours worked and pay received. Records required are often in the nature of a diary. In it the student will list daily the main farm jobs in which experience has been gained, highlights, and observations pertaining to related science.

Employer's Estimate of the Boy on the Job—Use of this form is another business-like approach for use of instructor with employer. It is used at both the initial and final stage of placement. The employer rates a boy as a worker and also as a person when first placed. The use of the form makes the rating of the employer more objective, and efforts are made to improve the habits of the boy if needed. An example of such form is shown.

Making a Reputation—It is essential that boys be carefully briefed before going out on placement. Much grief can be avoided if a good job of briefing is

done. Teachers use this list as a basis for briefing before boys leave the classroom for summer placement. The items used by the Norfolk County School are as follows:

Making a Reputation

1. Learn to make good on every job.
2. Earn a reputation as a dependable worker.
3. Adapt yourself to the working conditions of your particular job. Learn to get along with everyone on the job. Some of you fail because you do not give these two suggestions proper consideration.
4. Learn to do many different kinds of work well. This is experience. Accumulate all you can.
5. Make good so that next year you

may return, perhaps at an increase in pay. If you make good, it is easier for another student to secure work there.

6. Have an understanding with your employer about time off. Do this before you actually start working on the job. Misunderstandings about time off are the cause of some failures.
7. You are on the job during the summer, a comparatively short time. Your employer works the year round, and he appreciates everything you can do to lighten his load of responsibility. Try to share some of your employer's responsibility, and do everything possible to make him glad he hired you.

(Continued on page 12)

Weymouth Branch
NORFOLK COUNTY AGRICULTURAL SCHOOL,
Weymouth High School, East Weymouth, Mass.
EMPLOYER'S ESTIMATE OF THE BOY ON THE JOB

(Initial or Final)

Student _____ Age _____ Date Issued _____

I. Name of Farm _____ Location _____
Type of Farm _____ Size _____
Livestock 1. _____ Crops 1. _____
(kind 2. _____ (kind 2. _____
and _____ and _____
Number) 3. _____ Acres) 3. _____

II. Duties of Boy: 1. _____ 5. _____
2. _____ 6. _____
3. _____ 7. _____
4. _____ 8. _____

III. Employer's Rating: (Check with X in Squares below) 1. Excellent 3. Good 5. Poor
2. Very Good 4. Fair 6. Very Poor

a. Boy as a Worker: 1 2 3 4 5 6 b. Boy as a Person: 1 2 3 4 5 6

1. Dependable						1. Cleanliness					
2. Interested						2. Appearance					
3. Ambitious						3. Co-operative					
4. Productive						4. Manners					
5. Industrious						5. Attitude					
6. Punctual						6. Sociable					
7. Versatile						7. Honest					
8. Thorough						8. Obedient					
9. Efficient						9. Tactful					
10. Skilled						10. Disposition					
11. Sensible						11. Thoughtful					
12. Initiative						12. Humane					

IV. Employer's Written Estimate:

V. Suggestions for Improvement:

Instructor _____ Employer _____
Date Returned _____

Individual On-farm - - -

(Continued from page 11)

8. When visitors come to the farm, go about your work as usual.
9. Report all prepared for work at least a few minutes before it is time to start in the morning. Promptness in beginning on time will go a long way toward establishing your reputation as a good worker.
10. Remember that on many jobs your employer has to make a profit on your labor in order to justify hiring you. Is your work returning a profit? Would your employer be better off to hire some other person?
11. Toward the end of the season—the last month—be sure to do good work. Finish strong!
12. Be a gentleman at all times.
13. Don't grumble. Be courteous.
14. One leak may sink a boat. Is failure to observe any of the above suggestions likely to be the leak that may sink your boat?

**YOU ARE MAKING A REPUTATION FOR YOURSELF AND FOR YOUR SCHOOL
IT'S UP TO YOU**

Conclusion

It has been the experience in Massachusetts that the home project is too small. Something bigger is needed. Boys satisfactorily completing four years of placement in diversified training make excellent help for occupations related to farming and even for the armed forces. Representatives of agricultural industry and services seek the type of graduate that vocational agriculture turns out. Also, numerous opportunities are open to vocational graduates to engage in farming as a laborer, herdsman, and as a farm manager; whereas, opportunities for establishing oneself in farming as an owner, renter, or partner are becoming scarce in Massachusetts.

Parents often are reluctant to "dig deep" to finance a productive project of a desirable scope necessary for a satisfactory labor income and adoption of improved practice. With placement as the core of the individual's farming program, teachers get some relief over the constant haggling with students and parents over sufficient funds needed for starting a sizable project. Less crucial periods arise with students on placement than with those individuals carrying projects. Therefore, the supervision visits are made less frequently—usually once in every two weeks. Parents, as well as their sons, are happy with the placement type of a training program. The parents appreciate the fact that their sons are fully occupied during the summer for six months. They realize that the boy is under competent supervision by employer and teacher while working outdoors and bringing home \$30-50 a week.

We must recognize that the North Atlantic region is rapidly shifting from a rural, agricultural society to an urban, industrial and service society. This situ-

Enlist the Cooperation - - -

(Continued from page 7)

3. During the period immediately preceding each unit of instruction or cluster of units (short-term course of study for a particular pupil). Arrangements or negotiations can be made or started during one visit for units of instruction as far ahead at least as they have been identified in the pupil's individualized farming program.

Of added importance, negotiations with parents contribute to the strength of the local department by establishing functional relationships with parents, developing a sense of belonging among pupils, and defining the role of the teacher in the training of his pupils. The attention to and planning of clear-cut arrangements with parents on farm visits will serve as one reason for your reply, "I'm training my pupils vocationally." □

Make the Most of - - -

(Continued from page 4)

lad to meet me after school and we will run out to his home to see if I can find the answer for him.

Teaching Through Demonstration

At some time during a farm visit with this boy I have to be sure that he is instructed and shown the exact condition his animal or crop must be in to enable him to sell it for top market price. Color, weight, or feel does not mean too much to this boy until it has been shown to him and proved to him. If his crops fail to meet specifications or his livestock is rejected for sale it might mean he has to start over with something else; more than that, it means to me that I have failed him in my farm visitations.

Checking Records

In concluding this subject, I believe another purpose of farm visits for every boy taking vocational agriculture is to see that his farm records are adequately kept and that they tie in with the boy's supervised farming program. They should be summarized periodically and at the end of each year they should be studied with the idea of finding ways to improve upon the operation of that particular farm enterprise for more net returns or more efficiency.

In setting up these purposes for my farm visits I make it easier for the student of vocational agriculture to live up to his motto, "Learning to Do, Doing to Learn." □

ation is especially pronounced in the New England States along the Atlantic seaboard. Consequently, we are faced with the task of preparing young men for the related occupations in agriculture—not just for farming. Farm placement seems to be the answer to the situation for at least sixty per cent of our enrollment. □

Meaningful Purposes - - -

(Continued from page 8)

where the best places in the community can be found to study various problems in the course in vocational agriculture.

7. *Degree of mechanization and modernization* should be a picture the agriculture teacher will want to get. There is little need for greater emphasis on a problem in the course of study if all farmers make it a standard practice on their home farms. If farmers have failed to modernize their farming businesses in some respect, then the teacher will need to develop those areas in question in the classroom.

Promotional Purposes

Public relations is a constant concern to the vocational agriculture teacher. The farm visit is a splendid medium for help in developing such relations in the following ways:

1. *To help explain to and encourage farmers in the community about the need for superior home supervised farming programs* and to solicit aid in the development of such programs. The teacher of agriculture can do nothing with home farming programs without the aid of parents. Proper explanations will help build such programs.
2. While on farm visits, the teacher of vocational agriculture will want to ask for the aid of the farmers in the development of the course of study for vocational agriculture, and to gain support for his present program and methods.
3. The farm visit is a splendid medium for aid in building the adult education phase of the program of agricultural education offered in the school. The teacher can enroll new members and gain support for his present adult education program.
4. The teacher will want to use farm visits to gain support for the growth of the program offered through the *Future Farmers of America*.
5. An alert teacher will promote the teaching profession by acting in the best professional manner during all farm visits.
6. A professionally minded person visiting a farm will use the visit to aid the farmers in the community to a better understanding of their school and its administration.

Social Purposes

1. The teacher of vocational agriculture should use the farm visit to gain an understanding of parents and patrons in the community, and to permit them to know and have confidence in their teacher.
2. The teacher should use the farm visit to build rapport with his students through a closer relationship and a more thorough understanding of common problems of both a personal and an agricultural nature. □



Teachers find small group conferences with their supervisors to be one of the most effective ways of planning better programs according to the writer's study.



An in-service workshop for Ohio teachers of vocational agriculture on farm machinery adjustment. Ohio teachers say that supervisors can give valuable assistance to them through such meetings.

Teachers express their opinions as basis of - - -

An evaluation of the supervisory program in Ohio

J. E. DOUGAN, District Supervisor, Ohio



J. E. Dougan

Regional Supervisory Conferences, and State Staff Meetings. A Master's thesis study was conducted by the writer in an attempt to get the answers from teachers relative to the supervisory visit, in-service education aids provided for teachers, and to determine the items a supervisor should use in appraising a local department.

HOW can supervisors best spend their time assisting teachers in developing better programs of vocational agriculture? This question comes up for discussion wherever supervisors meet, such as at the National FFA Convention, A.V.A. Meetings,

One hundred teachers of vocational agriculture participated in an evaluation of selected activities of the supervisory program in Ohio. The evaluation was made on the premise that the teachers' judgments concerning their experiences with various supervisory techniques and procedures can be integrated with the ideas of those responsible for such programs to the end that better educational leadership can be developed.

Ninety-six per cent of the teachers surveyed returned completed questionnaires. The teachers responding had completed at least three years teaching experience in Ohio and represented a total of 8.8 years of teaching experience. The teachers had an average of 61.4 students enrolled in organized instruction including young and adult farmer classes and 67 per cent of the teachers had some professional training beyond the Bachelor of Science Degree.

Teachers Want Regular Visits

Of the teachers studied, 58 per cent expressed a desire for the supervisor to visit them once a year, while 38 per cent desired to be visited twice a year. As the teachers acquired additional professional training more of them wanted only one visit each year. It was reported by 65 per cent of the teachers that a half-day visit was sufficient, whereas, 35 per cent stated they would benefit from a full day of supervision. It was suggested by 65 per cent of the teachers that a supervisor should observe at least two periods of classroom teaching while 29 per cent reported four periods should be observed. It was stated by the teachers that if the supervisor's visit consisted of only a half day that sufficient time should be allocated for a discussion of the classroom teaching and other phases of the local program with the teacher and local school administration. The majority of the teachers stated any school day was satisfactory for the supervisor to visit their department and that they had no preference as to the time the supervisor arrived.

Preparing for the Supervisory Visit

Over 90 per cent of the teachers indicated it was desirable for the supervisor (Continued on page 16)



Meetings of the supervisor, the local school head, and the vocational agriculture teacher should be scheduled on supervisory visits. A. E. Ritchie, Department of Agricultural Education, confers with Clifford Craig, Executive Head, Summit Station School, and Ralph Needs, teacher.



In the course of a supervisory visit, teachers want to learn the evaluation which others place upon various phases of the program. This picture shows an evaluation of teaching aids taking place in the course of a supervisory visit. Improvement is the end product of supervision.

Technical skills needed by teachers in fruits*

PHILIP S. BARTON, Teacher Trainer, University of New Hampshire



Philip S. Barton

TECHNICAL skills in fruits, requiring a planned demonstration by teachers of Vocational Agriculture, was one of the seven subject matter areas selected for inclusion in the North Atlantic Regional Project.

A summary of a fruit skills survey showed that seventy-nine per cent of the teachers returning the survey taught some skills in fruits. The survey sheet contained 129 technical skills and at least fifty per cent of the teachers used 42 of the 129 listed.

The survey sheet was divided into six major headings, namely: Propagation, Planting, Care of Young Plants, Care of Mature Plants, Identification and Judging of Fruit Varieties, and Marketing (see Table I). Data in this table indicate that the proportion of teachers who used the skills, as classified, varied from a high average of 51.5 per cent for the group of skills under "Planting" to a low average of 10.3 per cent for the skills under "Marketing."

Table I also indicates the place where teachers received the training with a high of 20.5 per cent on the farm for "Propagation" and a low of 8.2 per cent for "Identification and Judging"—a high of 9.2 per cent for Vo-Ag in "Care of Mature Plants" and a low of 7.5 per cent in "Marketing"—a high of 46.7 per cent in college for "Propagation" and a low of 35.2 per cent in "Care of Young Plants"—a high of 41.3 per cent on the job for "Marketing" and low of 23.8 per cent for "Propagation."

Values placed on each of these areas by the teachers is also indicated in Table I with a high of 72.6 per cent for "Planting" skills and "Propagation" with

*The last in a series of reports of studies dealing with the Technical Skills needed by Vo-Ag teachers. The series was started in the October, 1954, issue.

Table I. Summary of Technical Skills in the Area of Fruits Reported As Used by Teachers in the North Atlantic Region, Showing Where the Skills Were Learned and the Value Placed Upon Them.*

Major Headings Under Which the Skills Were Classified	Average Percentage of Teachers Who Taught These Skills in Each Area	Distribution of Teachers by Average Percentages of the Value Placed Upon the Skills			Distribution of Teachers by Average Percentages of Where They Learned the Skills			
		High	Medium	Low	On Farm	In Vo-Ag	In College	On the Job
Propagation.....	26.5	31.1	43.1	25.8	20.5	9.0	46.7	23.8
Planting.....	51.5	72.6	22.6	4.8	19.6	8.7	44.3	27.4
Care of Young Plants.....	42.7	59.4	31.6	9.0	21.0	8.3	35.2	35.5
Care of Mature Plants.....	37.0	65.0	26.8	8.2	16.4	9.2	39.0	35.4
Identification and Judging.....	16.8	64.0	27.8	8.2	8.2	8.2	46.6	37.0
Marketing.....	10.3	69.0	26.0	5.0	11.2	7.5	40.0	41.3

*A copy of the detailed summary tabulation of the responses from 95 teachers to the 129 skills listed under these six major headings is available upon request from the Department of Agricultural Education, University of New Hampshire, Putnam Hall, Durham, New Hampshire.

purpose of developing technical skills as well as theory. It would also seem important to stress new approved practices such as irrigation, power pruning, freezing, etc. as the summary showed few teachers using these newer skills.

Table 2. Responses of Teachers to Skills Taught by the Largest Number in Each of the Six Major Headings, Showing Where These Skills Were Learned and the Value Placed on Them.*

Skills Taught by the Largest Number of Teachers in Each of the Six Areas Shown in Table 1	Average Percentage of Teachers Who Taught These Specific Skills	Distribution of Teachers by Average Percentage of the Value Placed Upon the Skills			Distribution of Teachers by Average Percentages Where They Learned the Skills			
		High	Medium	Low	On Farm	In Vo-Ag	In College	On the Job
Propagation, Strawberries by Runners.....	81.0	77.0	18.9	4.1	39.8	8.9	21.2	30.1
Planting.....	86.8	84.7	14.1	1.2	11.1	8.5	55.6	24.8
Care of Young Plants.....	81.0	77.5	20.0	2.5	19.8	10.4	42.5	27.3
Care of Mature Plants.....	87.4	84.4	14.5	1.1	18.0	10.7	43.5	27.8
Identification and Judging (Area and Skill identical).....	48.4	66.1	25.4	8.5	8.5	8.5	47.8	35.2
Marketing, Arranging Fruit Displays for Advertising Value.....	31.6	65.4	30.8	3.8	2.4	11.9	42.9	42.8

* One for each area shown in Table I.

25.8 per cent receiving the most low value ratings.

Table II indicates the skills used the greatest number of times under each of the six major headings. "Hand Pruning of Apples and Pears" rated highest with 87.4 per cent of the teachers using this skill and "Arranging Fruit Displays for Advertising Value," with 31.6 per cent of teachers using it, rated the lowest.

Both Tables I and II have significance in that they indicate that "in college" and "on the job" are far more important from the standpoint of teachers acquiring the selected skills than either the "farm" or the "Vo-Ag Class." Both tables also indicate the high values placed upon the selected skills by the teachers regardless of where the skills were obtained.

It would appear from a review of both Tables I and II that, so far as fruits are concerned, at least, we should encourage departments of Horticulture to provide courses in which technical skills are given due emphasis. In addition to the undergraduate and graduate courses in fruits at the Teacher Training Institution, on the job, or in-service training, should be provided for the

Supervising Farming Programs

(Continued from page 5)

Remember students may have work to do.

- Go over the farming program carefully. Make suggestions and leave them in written form for high school and other students as needed.
- Do not overlook an opportunity to teach. Question, demonstrate, explain, discuss—getting the member to do as much as possible. He learns by doing. You want to know if he can do the job before you leave.
- Talk with members of the family about the farming program. Get their advice and cooperation in helping vocational agriculture students. Make them feel that each of them has a responsibility for the success of the program.
- Look for needed farm mechanics jobs, improvement projects, and additional farm and home improvement jobs that will aid in the training program of the student.
- Discuss with the student important jobs to be done in the future and when your next visit should be made to the farm.
- When you leave make a record of your visit and such important items as jobs needed to be taught in class, individual jobs, students should study, important farm improvements needed, date of next visit, etc.
- Don't forget to give the member a pat on the back, something to keep him inspired. Commend him for things he has done well, encourage him to do other things better.

One becomes a person in proportion to his conscious and discriminating sense of values.

How well we teach is revealed in - -

Differential attitudes of farmers toward the grain marketing system

ALVIN W. DONAHOO, Educational Director, Minneapolis Grain Exchange



Alvin W. Donahoo

IN the field of vocational agriculture, instructors of adult farmer classes or Institutional On-Farm Training classes have tended to evaluate their work in terms of the number of improved practices adopted. However, very little has been done to test the effects of classroom instruction on the adult student. Likewise, little research has been done to test the effectiveness of certain audio-visual aids that are used in the course of instruction.

The purpose of this study* was to provide information useful in conducting classes for adults. This study was intended to afford specific information on two questions: (1) Does instruction in grain marketing change the attitude of adult farmers toward the present system of grain marketing? (2) Does the use of certain audio-visual aids make instruction on grain marketing more effective?

Plan and Procedure

A unit on grain marketing was used as a basis of the study because grain marketing is an important phase of farm management for most Minnesota farmers. Also, the Department of Agricultural Education at the University of Minnesota has been encouraging instructors of vocational agriculture to give

more emphasis to this area. It was an area where attitudes were freely expressed as the public in general tends to view the marketing system somewhat suspiciously. The audio-visual aids tested were: (1) a selected motion picture, (2) a selected set of slides, (3) a field trip to a central grain market, and (4) a combination of the motion picture, set of slides, and field trip.

Population

The population used in this study was limited to adult farmers enrolled in Institutional On-Farm Training classes for veterans in the state of Minnesota. Cooperating groups were selected at random from all schools in Minnesota having two or more classes of veterans. The investigation was made in twelve schools, and 355 individuals participated. With two classes in each school participating in the study, each school was an independent experiment with its own experimental and control group. From the twelve schools three were selected at random to use a motion picture, "Marketplace U.S.A.," and three schools were selected at random to use the set of slides, "Strictly Public," in the experimental classes. A field trip to a central grain market was selected to be used in the experimental classes of three other schools, and the three remaining schools were selected to use a combination of the motion picture, set of slides, and field trip.

Both the control class and the experimental class within a school were taught by the same instructor. Within



A barley buyer in the cash grain market explains to members of a Veterans' Training class some of the factors that he considers when purchasing grain.

a particular school the same amount of instructional time was devoted to each class; however, instructional time in the different schools varied. Classes were kept separate throughout the experiment although the instruction was identical except for the use of the selected audio-visual aids.

The Testing Program

The Otis Employment Test was used to obtain a measure of mental ability, and this test was administered to all students who participated in the study. Economic conservation was measured by using Part V of the Minnesota Personality Scale. The attitudes of the individual toward the present system of grain marketing were measured by an attitude inventory constructed by the writer. The attitude inventory and Part V of the Minnesota Personality Scale were administered as pre-tests and post-tests. The pre-test scores and the mental ability test scores were used as independent matching variables in the analysis of the data.

Statistical Analysis

The statistical techniques used to analyze the data are widely known among research workers. The first step in the analysis was to test the difference between the means of the pre-test and the post-test scores in each class. This difference was determined by the use of

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Members of Institutional On-Farm Training classes from Brewster and Little Falls, Minnesota, participate in a discussion of marketing problems at the Minneapolis Grain Exchange.



Futures broker explains to young farmers how to read the blackboards where grain prices are posted for public information. Such first-hand information is useful.

* A Ph.D. study, Dept. of Agricultural Education, University of Minnesota, Minneapolis, Minnesota. (March 1953)

the "t" test. A significant difference between the pre-test and the post-test scores indicated a significant change in attitude.

In determining the difference between the means of the control and experimental class in each school, the statistical analysis included: (1) testing the homogeneity of variances for each group separately, (2) the analysis of variance and covariance if the variances were homogeneous, (3) and summarizing the data by combining the information from the independent test of significance.

Findings

Did instruction on grain marketing result in a change of attitude toward the present system of grain marketing? In sixteen of the twenty-four classes, there was a significant difference between the means of the pre-test and post-test scores. In eight classes there was no difference between pre-test and post-test results. However, out of the eight classes where there was no difference, seven were control classes where no special audio-visual aids had been used. It can be concluded that in this study instruction resulted in a change of attitude in two-thirds of the classes.

Did the use of selected audio-visual aids make classroom instruction on grain marketing more effective? The results of the analysis of variance and covariance gave some *F* values that were significant and others that were not significant. By finding the probability associated with the *F* values, it was possible to combine the information from the independent tests of significance. The use of each of the audio-visual aids gave the following results:

The motion picture: By combining the information of the three tests of significance from the schools using the motion picture, a chi-square value with a probability of less than .01 was obtained. This provides evidence that the motion picture was an effective teaching device in changing attitudes of adult farmers.

The set of slides: By combining the information of the three tests of significance from schools using the set of slides, a chi-square value with a probability of less than .01 was obtained. This provides evidence that the set of slides was an effective teaching device in changing attitudes of adult farmers.

The field trip: The field trip to a central grain market as conducted in this study left some doubt as to its effectiveness in changing attitudes of adult farmers. In this study, adult groups visited the market to watch the trading and to hear discussions of marketing practices by specialists.

The use of the combination of motion picture, slides and field trip: By combining the information of the three tests of significance from schools using the combination of audio-visual aids, a chi-square value with a probability of less than .05 was obtained. This provides evidence that the combination of audio-visual aids was an effective teaching technique in changing attitudes of adult farmers.

Implications

As a result of this study certain implications are suggested. Instruction, with or without the use of special audio-visual aids, brought about a greater understanding and appreciation of the grain marketing system. With understanding there was a significant change in attitude in two-thirds of the classes. However, seven of the eight classes where there was no change in attitude were classes where no special audio-visual aids were used. This indicates that there is undoubtedly a need for audio-visual aids to assist instructors in teaching grain marketing.

The motion picture and the set of slides used in this study were valuable teaching tools in developing understanding and changing attitudes when these aids were put in the hands of instructors of adult farmer classes. However, good motion pictures and slide sets on marketing are difficult to find. As our competitive marketing system has played a very important role in bringing about our present level of living, perhaps the development of good teaching aids to tell the function of the market is an area that should be further explored by colleges, commercial firms, and marketing agencies.

Experience has shown that field trips are among the most effective of all audio-visual aids. However, the field trip to a central grain market, as used in this study, left some doubt as to its effectiveness in changing attitudes. While it is impossible to say why the field trip was not effective, it appears to the writer that there were at least two weaknesses. First, the functions of various segments of the marketing system, such as the commission men, speculators, etc., were studied separately. Secondly, the field trip took the form of a one-day marketing school—marketing specialists did most of the teaching. It is possible that specialists were unable to put across the functions they were performing in language that the students understood. In the future the class instructor should see that the students understand and appreciate the relationship that exists between various segments of the grain trade.

Also, the class instructor should not rely on marketing specialists to do the teaching, although these specialists may make excellent resource persons who can be of great assistance. If these precautions are followed, then the field trip should be an effective teaching tool.

In this study of attitude changes, the field trip was effective when it was combined with the other audio-visual aids, i.e., the motion picture and the set of slides. The pictures explained the over-all role of the grain marketing system. When the instructor used these pictures preceding the field trip, it became a method of bringing about a change of attitude.

A number of the instructors who took part in this study found teaching a unit on grain marketing a rather difficult assignment as their understanding of the marketing system was somewhat limited. Many of the instructors

An Evaluation of - - -

(Continued from page 13)

to notify the teacher in advance of his visit and to notify the local school superintendent as soon as he arrived at the local school. All the teachers preferred having a conference with the supervisor during the visit and 94 per cent stated a conference should be held with the local school superintendent.

The supervisor should send a written evaluation of the program to the local teacher according to 95 per cent of the teachers. Eighty-seven per cent also indicated that a copy of the evaluation should be sent to the local school superintendent.

Teachers Want Supervisors to Attend Their Activities

Nine out of ten teachers said that it was desirable for the supervisor to attend workshops and technical meetings planned for their professional improvement, to visit young and adult farmer classes, and to visit the farming programs of the students with the teacher. It was indicated by 88 per cent of the teachers that it was desirable for supervisors to visit them during June, July, and August, a practice which has not generally been applied in Ohio. Several suggestions were given by the teachers as to how a supervisor might assist them during a visit at this time. Some of the suggestions were: Assist in the development of a long-time program for the department, recommend additional facilities, equipment and teaching aids for the department, and assist with the planning of the program of instruction. Many teachers requested that the local school superintendent be included in the discussion of the above items.

Evaluation of Local Programs

The teachers included in the study indicated the degree of importance of several items which are considered by the supervisory staff in evaluating a local program of vocational agriculture.

The Students' Farming Programs, Student Project Record Books, the Program of Instruction for all classes, local FFA Chapter Program of Activities and the Young and Adult Farmer Program received high ratings from the teachers as items for use in evaluating their local department by a supervisor.

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overlooked the opportunity to tie their classroom instruction to the community grain market representative, the elevator manager. Here was a community resource on marketing of grain available to all instructors, and yet most failed to enlist this help. While instructors of agriculture cannot be specialists in every field, they do have specialists in most fields available in their community. The instructor of vocational agriculture should become a specialist in using the resources of his community to the utmost. Only in this way can he be most effective in his teaching. □

College achievement of the Vo-Ag student

Scholastic success of vocational agriculture students compared with non-vocational students in college of agriculture curricula

THEODORE M. BROOKS, Graduate Student, University of Maryland



Theodore M. Brooks

ON the premise that the most accurate method of evaluating a teaching program is the subsequent success of the students, the results of the vocational agriculture program as taught in Maryland public schools is very gratifying.

It has often been assumed by educators and guidance counselors that the vocational agriculture curriculum is inferior to other high school curricula in preparing a student for higher education. To determine whether or not this was true for the vocational agricultural program as offered in Maryland public secondary schools, a study was made covering "Certain Aspects of Scholastic Achievement of High School Vocational Agriculture and Non-Vocational Agriculture Students in the College of Agriculture Curricula at the University of Maryland."¹

The study covered a carefully selected group of one hundred-seventy male students from rural areas, where they naturally experienced similar educational backgrounds and opportunities. Eighty-five of the students had taken vocational agriculture in high school; the other eighty-five were students who had pursued some other secondary course of study. All students had taken their college work at the University of Maryland and had graduated from the College of Agriculture when this study was made. The vocational students selected for the study had at least three credits in vocational agriculture in high school and the non-vocational students had none; students with one or two credits in vocational agriculture were eliminated entirely.

The percentile ranks of the selected students, based on all students entering the University of Maryland, and computed from the American Council of Education General Intelligence Test, were obtained from the Psychology Department to compare the scholastic ability of the two groups at the time they entered the University. The vocational agriculture students had an average percentile rank of 31.16, considerably below the average of all students, whereas the non-vocational group had an average percentile rank of 49.60, or about the same as the average for all

students. The percentile rankings were used to separate the two groups into the upper quartile, the middle half, and the lower quartile to make it possible to make comparisons between students of nearly equal scholastic ability in the two groups. A summary of these comparisons appears later in this article.

Other comparisons were made between the overall college scholastic averages of the two groups; between the college courses grouped under the headings of General College Courses, Science and Mathematics Courses, Agricultural Courses, and Other Courses; and between Agricultural Courses, sub-grouped into Animal Industry, Plant Industry, Agricultural Engineering, and Agricultural Economics.

It may be seen from Table 1 that the scholastic averages of the two groups of students were very close in the comparisons made between the various major groupings of courses. The greatest difference encountered in these comparisons was .14 of a grade point, in favor of the non-vocational group, in the Science and Mathematics Courses. A difference of only .03 of a grade point separated the averages of the two groups of students for all college work completed, with the vocational agriculture students having a grade point average of 2.61 and the non-vocational students 2.64.

The comparisons between the grade point averages of the two student groups in the sub-groups of Agriculture Courses showed even smaller differences than the comparisons between the major groups of all courses. The widest range was .12 of a grade point, in favor of the non-vocational students, in the Agricultural Engineering Courses. In one case, Agricultural Economics, the averages of the two groups were identical, and the averages for the Animal Industry and the Plant Industry courses were very close. The averages for all work in Agriculture were separated by only .01 of

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Table 1. Grades of the Vocational and Non-Vocational Students in All College Courses by Major Groups of Courses.

Course Group	Student Group	Total Semester Hours and Per Cent of Total Hours in Each Letter Grade*					Grade Point Average**
		A	B	C	D	Total	
General Courses.....	Vocational	97	459	1244	490	2290	2.07
	Non-Voc.	4.2	20.1	54.3	21.3	100.0	
Science and Math....	Vocational	138	649	1261	444	2492	2.19
	Non-Voc.	5.5	26.1	50.6	17.8	100.0	
Agriculture.....	Vocational	210	859	1062	503	2634	2.29
	Non-Voc.	8.0	32.6	40.3	19.1	100.0	
Other Courses.....	Vocational	346	986	993	471	2796	2.43
	Non-Voc.	12.4	35.3	35.5	16.8	100.0	
All Courses.....	Vocational	1194	1989	1010	136	4329	2.98
	Non-Voc.	27.6	46.0	23.3	3.1	100.0	
Agricultural Economics	Vocational	1240	1959	1060	111	4370	2.99
	Non-Voc.	28.4	44.8	24.3	2.5	100.0	
Agricultural Engineering	Vocational	402	715	406	77	1600	2.90
	Non-Voc.	25.1	44.7	25.4	4.8	100.0	
Animal Industry	Vocational	260	428	342	72	1102	2.79
	Non-Voc.	23.6	38.9	31.0	6.5	100.0	
Plant Industry	Vocational	1903	4022	3722	1206	10853	2.61
	Non-Voc.	17.5	37.1	34.3	11.1	100.0	
Total Sample	Vocational	1984	4022	3656	1098	10760	2.64
	Non-Voc.	18.4	37.4	34.0	10.2	100.0	

*The first figure in each instance is the total semester hours and the second figure is the per cent of the total in that group.

**Grade point averages were figured by allowing the following for each credit:

A = 4, B = 3, C = 2, and D = 1.

Table 2. Grades of the Vocational Agriculture and Non-Vocational Students by Major Groups of Agricultural Courses.

Course Group	Student Group	Total Semester Hours and Per Cent of Total Hours in Each Letter Grade					Grade Point Average
		A	B	C	D	Total	
Animal Industry.....	Vocational	490	780	436	51	1757	2.97
	Non-Voc.	27.9	44.4	24.8	2.9	100.0	
Plant Industry.....	Vocational	459	807	401	47	1714	2.98
	Non-Voc.	26.8	47.1	23.4	2.7	100.0	
Agricultural Economics	Vocational	297	582	319	49	1247	2.90
	Non-Voc.	23.9	46.6	25.6	3.9	100.0	
Agricultural Engineering	Vocational	312	552	400	32	1296	2.88
	Non-Voc.	24.1	42.5	30.9	2.5	100.0	
Total Sample	Vocational	260	438	131	9	838	3.13
	Non-Voc.	31.0	52.3	15.6	1.1	100.0	
Total Sample	Vocational	317	452	172	11	952	3.13
	Non-Voc.	33.3	47.5	18.1	1.1	100.0	
Total Sample	Vocational	147	189	124	27	487	2.94
	Non-Voc.	30.2	38.8	25.5	5.5	100.0	
Total Sample	Vocational	152	148	87	21	408	3.06
	Non-Voc.	37.3	36.3	21.3	5.1	100.0	
Total Sample	Vocational	1194	1989	1010	136	4329	2.98
	Non-Voc.	27.6	46.0	23.3	3.1	100.0	
Total Sample	Vocational	1240	1959	1060	111	4370	2.99
	Non-Voc.	28.4	44.8	24.3	2.5	100.0	

¹Master's Thesis, University of Maryland, 1954, Theodore M. Brooks.

Analysis of trends in agriculture provides basis for

Revising educational objectives in vocational agriculture*

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Dan C. Chase

WHILE it is generally agreed that American agriculture has undergone profound change during the past half century, there is relatively little understanding among workers in the field of agricultural education as to the relationship and the implications of the changes for vocational agriculture.

At first glance there might appear to be little purpose in relating socio-economic trends in agriculture to the present educational objectives in vocational agriculture. For example, it is possible to regard the present objectives as satisfactory even though it might be agreed that changes have taken place in agriculture. Or even if the objectives were to be regarded as inadequate in terms of modern-day agriculture, it could be argued that they should remain as they are rather than run the risk of "thinning" out the vocational aspects of the program.

It might also be suggested that vocational agriculture still has much to accomplish within the framework of present objectives, and it is possible to assume that even if a need can be shown for modifying the educational objectives of vocational agriculture, little modification can be done as long as there must be adherence to the basic Smith-Hughes law.

While such questions are of value in that they represent serious thinking on an important problem, such doubts tend to attach primary importance to the past rather than to the present and the future of vocational agriculture. This is in spite of the fact that some leaders in the field of agricultural education are aware that changes in agriculture have been taking place and that these changes and their probable significance for vocational agriculture should be considered as they relate specifically to the educational objectives in vocational agriculture.

Objectives Are of Long-standing

Under the circumstances it is, per-

haps, appropriate to recall that, while the latest revision of the present educational objectives of vocational agriculture was published in 1940, these objectives represent the culmination of thinking that took place largely during the 1929-1940 period. Much of the study and discussion at that time was in terms of an even earlier, 1917-1929, setting. There can be little doubt but that the present objectives of vocational agriculture rendered a vital service during an earlier period in the nation's agriculture.

The crux of the matter now is whether when judged by the socio-economic trends in agriculture the educational objectives in vocational agriculture are still adequate for providing proper agricultural training in the secondary school system of the nation.

It is significant that few studies have been made in recent years which directly consider the specific educational objectives in vocational agriculture. Rather, recent investigations tend to emphasize the changes which are taking place in the enrollment pattern and occupational status of vocational agriculture pupils. Such studies are essential to the further improvement of vocational agriculture, yet we must consider more than the changes occurring in vocational agriculture. *There must be an awareness and understanding of the changes that are taking place in the population and industry served by vocational agriculture before there can be satisfactory understanding of what, if any, modifications might be desirable in the objectives of vocational agriculture.* Like all education, vocational agriculture "... will achieve its ends more successfully if its programs and policies grow out of and are relevant to the characteristics and needs of contemporary society."¹

It has been assumed that the pupils who enroll in vocational agriculture come from agriculture. It has also been assumed that the pupils who graduate from vocational agriculture will return to agricultural occupations. It follows, then, that changes in the size and composition of the

group enrolling in vocational agriculture are largely determined by the nature of the agriculture from which they originate. Also, the requirements of the agricultural occupations to which vocational agriculture graduates return are determined by the characteristics of the agricultural industry. Thus it is evident that agricultural change is the primary source of the changes that are occurring in the pupil enrollment pattern and occupational status of vocational agriculture graduates.

Changes in the nation's agriculture mean that from time to time changes are needed in the educational objectives of vocational agriculture. And changes in objectives must be based on an analysis of the socio-economic trends in the agriculture which is said to supply and later receive vocational agriculture pupils.

Summary of Socio-Economic Trends in Agriculture

There are many socio-economic trends in agriculture that are clear-cut and for which there is much factual supporting evidence.

One of the most significant trends during the past fifty years has been the one-third decline in the farm population. During this period the total population of the United States doubled. Migration from the farm, particularly of the young, has contributed to the decrease in the farm population, with most migrants being selectively drawn toward industrialized urban centers. There has also been a marked drop in the agricultural working force. The average age of farm operators is increasing, and more older farmers are remaining in farming.

The number of farms has decreased, but the size of farm has increased. Cropland acreage has remained almost constant during the past twenty to thirty years. More farms are operated by part owners. Part-time farming has

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Robert Garner, of the San Luis Obispo, California Chapter is pictured drilling in his oat and vetch hay project. The San Luis Obispo Chapter has a farm equipment cooperative to enable students like Bob to actually engage in the business of farming. The students rent land in nearby areas from farmers, the county airport and some land which the local school district owns for future building sites. The Chapter owns approximately \$8,000.00 worth of equipment which includes three tractors, two mowers, side delivery rake, a one-man pickup baler, off-set disk harrow, spike tooth harrow, two grain drills, and a two and one half ton truck. A local automobile dealer furnishes a pickup truck for their use. This year ten members are farming over 100 acres which is planted to hay and grain.

*Based on doctoral dissertation of Daniel Chavez Chase, "Socio-Economic Trends in Agriculture as Related to the Educational Objectives in Vocational Agriculture," Library, The Pennsylvania State University, State College, 1954, 174 pp.

¹Report of the President's Commission on Higher Education, *Higher Education for American Democracy*, New York: Harper and Brothers, 1947, pp. 5-6.

increased greatly, with more farmers earning the major portion of their income in non-farm employment.

Technological developments have had a vital role in the progress of agriculture during the past half century. There have been pronounced increases in the adoption of farm machinery and labor saving devices, as well as fertilizers, new varieties of crops and livestock and many other improved farm practices.

Since the early 1900's, gross national agricultural output has doubled, agricultural output per worker has more than doubled, number of man-hours worked has declined, farm work increasingly requires less strength but more mechanical skill. Increased technology has resulted in the farmer purchasing more of his production needs from industry. Capital requirements for both farm operation and purchase have multiplied.

The non-farm population has grown to the point where most Americans neither recognize nor understand the problems of agriculture. On the other hand, the farmer's success is more and more being determined by off-farm factors. Often he is not acquainted with these off-farm factors, and he has little basis for understanding them.

There are, no doubt, other currents in the socio-economic stream of agriculture, but these trends represent the major changes which have taken place in agriculture since the beginning of the twentieth century. A careful analysis of these changes shows that thirteen major areas can be grouped and worded to include the population, land, technology and off-farm changes which have been discussed. These areas, stated as trends, are as follows:

1. There has been a decrease in the number of farms.
2. There has been an increase in the number of farmers whose main source of income is from non-farm occupations.
3. There has been an increase in the size of farms.
4. There is a lack of new lands that can be brought into farming.
5. Fewer agricultural workers are needed to produce food and fiber for the nation.
6. There are fewer young men in farming, and more older men are remaining in farming.
7. The average age of farmers is increasing.
8. The farmer is purchasing more of his production needs from industry.
9. There has been an increase in farm mechanization.
10. There has been an increase in capital requirements for farm purchase.
11. There has been an increase in capital requirements for farm operation.
12. An increasingly large portion of the nation's population is growing away from a knowledge and understanding of the problems of agriculture.
13. The farmer's success is increasingly being determined by conditions beyond his control.

Because excess rural youth are constantly migrating away from the farm,

effective guidance is needed to eliminate much of the social cost that exists with the present haphazard system. As fewer workers are needed in the nation's agriculture, larger numbers are migrating to non-farm occupations and occupations related to farming. The proper training of those who migrate to urban areas is a matter of concern for urban centers as well as the rural community if future citizens are to live productive urban lives. As the age of farm operators increases and as older men remain in farming, there is less turnover of farms, which decreases the number available, thus making it more difficult for young men to become established in farming. Also, young men have to compete with older and more experienced farmers, and the age at which vocational agriculture graduates can become established in farming tends to increase.

Significance of the Socio-Economic Trends in Agriculture for Vocational Agriculture

The decrease in the number of farms is an indication that fewer farms are needed. For those aspiring to farm ownership, there are fewer farms to select from. The increase in the size of farms has meant greater capital outlays for both farm purchase and operation. Larger farms tend to require more farm management skill, they tend to increase the difficulty of achieving farm ownership, and they tend to make agricultural college training more desirable. While a few new areas, particularly reclamation projects, sponsored by the government, have made some new farms available since World War II, there is a relative lack of new lands that can be brought into cultivation. With cropland acreage remaining almost constant since 1920, young men, for the most part, can no longer become established in farming by developing new farms in new farm areas. This has been one important factor that has meant that those young men who have land in the family are increasingly the ones who have been able to become established in farming.

With the increase in part-owners and part-time farming, non-farm occupations represent the major source of income for ever greater numbers of farmers. Agricultural training to meet the needs of this group becomes more necessary.

Increased farm mechanization has meant that those vocational agriculture graduates who can acquire a farm must be more highly skilled in farm machinery selection, maintenance and repair. The many technological develop-

ments have resulted in a large growth in the industries serving farmers. Along with this change there has been an accompanying increase in the occupations related to farming. Greater numbers of vocational agriculture graduates are entering the occupations related to farming, which has tended to increase the need for agricultural training for farm related occupations. Also, those who are able to acquire a farm must be more highly skilled in farm technology. Under the circumstances, agricultural college training becomes increasingly important for vocational agriculture graduates who seek establishment in farming.

Increased capital requirements for farm operation tend to limit the opportunities and raise the age at which young men can become established in farming. Increased capital requirements for farm purchase tend to postpone the time when rural youth can enter farming, as well as limit the number who can enter farming. A knowledge of the economic aspects of farming and skill in managing a farm are increasingly essential to successful farm ownership and operation.

With by far the greater part of the population removed from agriculture, it has become more important for agriculture and for the nation as a whole that the education of the non-farm population include training for understanding the problems of agriculture and their importance to the non-farm economy and non-farm population. At the same time, it has become more important for agriculture and the nation as a whole that the education of the farm population include training for understanding the place of agriculture in the total economy and the influence of the non-farm section on agriculture.

With the farmer's success increasingly being determined by conditions beyond his control, it has become more important that vocational agriculture graduates have an understanding of the many broad off-farm factors that determine success in farming. Such qualities as ambition, honesty, willingness to work

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Robert Campbell of the San Luis Obispo, California Chapter explains to Chapter Queen, Donna Ahlin, about his "Tumbler" pigeon project. It is only a hobby with Bob. However, he exhibits the pigeons at county fairs along with his sheep project entries. The premium from the pigeons pays Bob's expenses while attending the fair. Besides his pigeon project, Bob has a small flock of Southdown breeding sheep and thirty-three acres of hay and grain.

There is no substitute for - - -

"Eyewitness" Facts in Teaching Farm Management

J. H. LINTNER, District Supervisor, Veterans Training, Ohio

"HAVE you ever thought of yourself as a 'quarterback' on the farm?" It was the height of the football season and with this question Fred Bates, veterans teacher at Amanda, Ohio, immediately had the interest of his class who were assembled for a class meeting on the farm of one of the members.

Mr. Bates continued, "The quarterback on the football team has a number of resources he can call on at the time he has to decide on what play to use. There is the fleet halfback, the hard plunging fullback, the accurate passer, etc. If he uses these resources in the right way at the right time, after he has looked over the opponent's strength and weaknesses, good gains can be made and the game won. In the same way, you as the quarterback on your respective farms have many resources at your disposal. In the light of your opponents—weather, markets, disease, etc., you can call on your own resources of soil fertility, labor, feed, etc., in 'on the spot' decisions frequently with no more time to decide than the football quarterback."

The value of teachers and specialists working directly with farmers was early recognized by the Extension Service but, as implied in the name, this agency was handicapped in teaching Farm Management on an applied basis. Vocational Agriculture teachers with many demands on their time were in a similar situation. The Soil Conservation Service with its farm plans took a step in the right direction. However, too frequently these plans were prepared on a production basis with little teaching and practically no continuity over total management in response to changing conditions.

The present Farm Unit approach of the Extension Service recognizes the necessity for change in Farm Manage-

ment teaching. How successful it will be may well depend on the skill of the agents as teachers in using the "eyewitness" facts with which the farmer as "quarterback" must work with rather than trusting to the farmers to translate the abstract lessons of research data into his own situation.

Institutional On-Farm Training for veterans is built on the principle that classroom sessions, small group meetings on the farm, and the individual on-farm visits by the teacher are all necessary for applied Farm Management. The ability of teachers to take advantage of these provisions naturally varies. Many are eminently successful and have capitalized on new teaching opportunities in the same manner as Mr. Bates. Others frequently wonder why the things which seem so clear to them are not accepted by their students.

Veterans' classes will eventually fold into history as a program working with a limited number of farmers over a specific time. For those who concern themselves with teaching Farm Management to other groups in future years, let us not overlook the value of abstract Farm Management data and hypothetical or average farms *but what is infinitely more important*, let us use the "eyewitness" facts of the individual farms in applied Farm Management teaching.

To carry the football analogy one step further, if the farmer is the "quarterback" what is the role of the teacher, agent or farm planner who works with him? To me, Mr. Bates was the "coach" who laboriously has taught the fundamentals, charted the proper course of action in any given anticipated situation, and is prepared to influence the game from the sidelines by sending in instructions or pulling out the "quarterback" for consultation.

While the most successful coach is the one whose "quarterback" can call the right play without instructions from the bench, he has a responsibility for teaching from the sidelines and between halves, using specific situations which all players observed. In the same way the teacher must "coach" his "quarterbacks" in the light of individual farm facts while the game of Farming is going on. □



G. S. Guiler, Vo-Ag teacher at Canal Winchester, Ohio, gives some on the scene "coaching" to "quarterback" Paul Black regarding the next play in corn production.

(Photo Courtesy Dr. Ralph E. Bender)

An Evaluation of - - -

(Continued from page 16)

Teacher Participation Emphasized

Ohio teachers said that off-campus courses and other offerings of the graduate program in Agricultural Education in Ohio State University were the most effective procedures for professional growth and development. They gave a high rating also to small group conferences and in-service workshops. In-service education aids are more effective when the teacher participated than when materials are distributed for them to read according to these teachers. However, subject matter and teaching aids materials that had been developed for problem solving procedures were more effective than the other aids. Supervisory visits were considered effective particularly if the teachers were notified in advance of the visit so that necessary time could be planned for a conference with the supervisor and pertinent problems could be recorded for consideration. New concepts must be gained and new insights developed in Vocational Agriculture on the local level according to the respondents. Teachers believe this can be accomplished by the local school administrator, the teacher, and the supervisor working cooperatively together.

The written comments of some of the teachers indicate that they prefer to look only to their own field for assistance rather than securing help from local school administration. The cooperation and assistance by the supervisory staff with the local school in-service program leaders may tend to increase the effectiveness of classroom visits by the local school administration, local faculty meetings and other in-service aids to teachers. □

College Achievement - - -

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a grade point. While not appearing in either table a comparison was also made for the Agricultural Education Courses these two groups took. One of the widest variations, .13 of a grade point in favor of the vocational students, was found in this comparison, and the grade point averages were the highest of any group of courses, being 3.30 and 3.17. As might be expected the vocational group took more of these courses than the non-vocational group, the ratio being approximately two to one.

In addition to the comparisons above, and as indicated previously, comparisons were made between the scholastic averages of the students in comparable quartiles (based on intelligence scores) of each student group. All comparisons showed the two student groups to be about equally successful scholastically. In the comparison by quartiles in the four groups of courses taking all college courses into consideration (i.e., General Courses, Science and Mathematics, Agriculture, and Other) the vocational students had slightly higher averages in

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News and Views of the Profession

Kunsela Leaves Teacher Education



William R. Kunsela

WILLIAM R. Kunsela, Head of the Division of Agricultural Education in the State College of Agriculture at Cornell University since 1951, became Director of the Agricultural and Technical Institute at Delhi, New York, on July 1. The Institute is

one of the units of the State University of New York and was founded in 1913 as one of six two-year technical schools serving agriculture in the state.

Dr. Kunsela was graduated from Cornell in 1939, having prepared to teach vocational agriculture. After a three-year period as teacher at West Canada Valley, New York, he entered military service where he attained the rank of First Lieutenant in the Air Force as a B-17 Pilot Instructor. Upon release from the military in 1945 he became a Regional Supervisor and Supervising Training Officer for the Vocational Rehabilitation and Education Division of the U. S. Veterans Administration in New York.

Returning to the College of Agriculture at Cornell in 1947, Dr. Kunsela became an assistant in the Agricultural Education Division of the Department of Rural Education. He completed work for his doctorate and received the degree in 1950. His appointment to the staff in Agricultural Education was made at that time.

Dr. Kunsela has been active in the Program Planning, Materials of Instruction and Professional Information committees of the North Atlantic Region. He has represented the Region on the Agricultural Section Committee of the A.V.A. on Professional Information. Several of the teaching aids and materials now in use in vocational agriculture in New York are the result of the contributions made individually and through leadership provided in committees by him. □

North Central Regional Research Conference To Be Held in Ohio

The North Central Regional Research Conference in Agricultural Education will be held at Ohio State University in Columbus on August 2 through 5. Final plans for this year's Research Conference were drafted by a Planning Committee at the North Central Regional Conference in Chicago, March 9. Members include: V. E. Burgener, Illinois; Harold B. Taylor, Indiana; George R.

Cochran, Minnesota; Carl M. Humphrey, Missouri; Ernest L. DeAlton, North Dakota; H. E. Urton, South Dakota; C. E. Bundy, Iowa; Loren E. Whipps, Kansas; Stanley Wall, Kentucky; H. Paul Sweany, Michigan; Howard W. Deems, Nebraska; and Walter T. Bjoraker, Wisconsin. Chairman of this year's conference will be Dr. Ralph J. Woodin with A. E. Ritchie acting as secretary to the group.

Teaching Still His Great Challenge

Ten years since his retirement as Professor of Agricultural Education Emeritus from the Pennsylvania State University, Doctor W. A. Broyles still finds teaching a stimulating challenge. Unlike many men upon reaching the compulsory retirement age, Dr. Broyles did not content himself with his hobbies, or with a life of inactivity. He looked about for teaching opportunities in institutions with higher, or with no retirement age limits. The result, he has spent 4 years on the Teacher Training staff of the University of Alabama, 3 years as a teacher of Agriculture at the Berry School, Mount Berry, Georgia, and 1

year with the Near East Foundation in Athens, Greece. He is now completing his second year on the faculty at Piney Woods, Mississippi, a school for Negro youth.

Doctor Broyles is the author of the scoring fan, a mathematical device for simplifying the work of judging contests. Many of the older teachers of Vocational Agriculture are familiar with the workbooks prepared and published by him during the era when the teaching emphasis in Agriculture was on subject matter. Doctor and Mrs. Broyles usually spend the summers on their farm in Pennsylvania.

A Correction

An error was made in the printing of the article which appeared in the May issue entitled "Prediction of Vocational Agriculture Teacher Success." On page 263, the paragraph at the top of the page should have read: "The technical agricultural tests were better predictors of vocational agricultural teacher success than were the manipulative farm skills, which had very little relationship to success, or the professional educational tests, whose exact relationship to vocational agriculture teacher success was inconclusive. The best single predictor of vocational agriculture teacher success was the farm management test."

Our apology to the author, A. P. Torrence, and to our readers. W. A. S.

Changes in the Magazine Staff



Henry Ross

HENRY ROSS, Professor of Agricultural Education at the Agricultural and Mechanical College of Texas, has been selected as the new Business Manager on the staff of the *Magazine*. Mr. Ross has been in the vocational agriculture program for 32 years.

Twelve years were devoted to teaching in the secondary schools of Texas.

He was reared on a cotton farm in Texas and was graduated with a B.S. degree in agriculture from the A. and M. College of Texas. Later he received a Master of Science degree in Agricultural Education.

Prior to teaching, he spent one year in military service in World War I and three years growing cotton as a farm operator. He served several years as Secretary of the Texas Vocational Association and on the standards committee of the American Vocational Association.

In the field of writing, he has collaborated and co-authored two books—*Agriculture in the Southwest* and *Modern Farm Shop*.

Professor Ross will continue his current duties in the Agricultural Education Department including teaching graduate courses by extension, managing a visual aids and film service, and directing technical in-service-training for the vocational agriculture teachers of Texas.

Professor Ross succeeds George Hurt,



S. F. Peterson

S. F. PETERSON, new member of the Editing-Managing Board, representing NVATA, grew up on a flue-cured tobacco farm in Sampson County, North Carolina. He was graduated from North Carolina State College in 1929. He has taught vocational

agriculture in the public schools of eastern North Carolina for 26 years. He has been teaching 20 years at Ayden where he is now employed.

Mr. Peterson was president of the North Carolina Vocational Agricultural Teachers' Association for two years. He served as vice president of NVATA for Region V from 1951 to 1954. Mr. Peterson was elected president of NVATA at the San Francisco Convention. He replaces Robert A. Wall, past-president of the NVATA, on the Editing-Managing Board.

Mr. Peterson is married and has one daughter, Frankie Lou. □

Supervisor in Texas, who was elected to the office of Business Manager last December in the annual meeting of the Editing-Managing Board. Other duties necessitated Mr. Hurt's resignation on the eve of taking over the office previously held by Byron McMahon of California. □

Professional and Teaching Aids

Agricultural Education Workshop Materials

The following materials are now available at the Iowa State College Book Store, Ames, Iowa. Add to price 2% sales Tax. Mailing charge—1 set, 30c; 2 sets, 40c; 3 sets, 45c; all 4 sets, 50c.

1953

- Suggestions For Teaching Land Evaluation, Appreciation and Use—12p
 - Inventory System For Vocational Agriculture—12p
 - Suggestions For Teaching Farm and Life Management—56p
 - A Suggested Teaching Guide of Pasture Improvement For Voc. Agri.—19p
 - Syllabus to be used with The Suggested Teaching Guide of Pasture Imp.—13p
 - Chapter Program Improvement—24p
 - Organization of 2 Man Departments—9p
- Price—\$1.80 per set (145p)

1952

- Techniques and Subject Matter For Teaching Pasture Improvement & Utilization—26p
 - Suggestions For Conducting More Effective Field Trips and Tours—7p
 - Adult Farmer Evening School Methodology—23p
 - A Promotional Program For Adult Farmer Evening Schools—8p
 - A Suggested Outline For Teaching Program Concerning Farmer Cooperatives—21p
 - Cumulative Records For Vocational Agriculture Students—17p
 - Suggestions For Teaching Proper Farm Land Use By Soil Conservation Service Planning Methods—12p
 - Suggestions For Conducting A More Effective On The Farm Visitation Program—8p
- Price—\$1.15 per set (122p)

1951

- A Four Year Teaching Outline For Vocational Agriculture In High School—22p
- Suggestions For Teaching Farm Management—41p
- Suggestions For Preparation Of Obj. Tests In Swine Production, Corn Production and Soil and Water Conservation—48p
- Suggestions For Teaching Crops and Soils—9p
- Recent Developments in Swine Nutrition—50p

\$1.60 per set (170p)

1950

- Suggestion For Poultry Production—10p
- Suggestions For Teaching Fruit and Vegetable Production—10p
- Suggestions For Teaching Hay and Pasture Production—22p
- Suggestions For Teaching Beef Production—18p
- Suggestions For Teaching Soil Management—19p
- Suggestions For Teaching Sheep Production—8p
- Suggestions For Teaching Dairy Production—11p
- Suggestions For Teaching Farm Law—6p

- Suggestions For Teaching Swine Production—17p
- Suggestions For Teaching Farm Mechanics—27p

Price \$1.35 per set (148p)

Miscellaneous Materials

Production and Preservation of Food by Farm Families Through Instruction in Vocational Agriculture, State Department of Education, Columbia, South Carolina, 1954. Limited distribution. 90 pages.

Ten problem based lesson plans dealing with the need for home production of food, the production of foods and the preservation of foods are included. Each lesson plan is supplemented by numerous up-to-date recommended practices. Teachers who are responsible for community canneries will find this publication especially helpful.

The Problem Method of Teaching by C. E. Rhoad, Number 178 University of Nebraska Publications. Price \$1.00. 59 pages.

This is known as the Operator's Manual involving twenty steps in teaching four variations of the problem method. Illustrations are given for the four variations.

Farming Program Record Book by Nebraska Vocational Agriculture Association. Revised, 1954. Journal Printers, Fairbury, Nebraska. 35 cents. 28 pages.

This publication will accommodate four production projects. It contains a double entry system for expenses. Space is also provided for Farm Betterment projects and Supplementary practices.

A Demonstration of the Procedures in Organizing a Local Young Farmers Association, G. Z. Stevens, Department of Agricultural Education, The Pennsylvania State University, State College, Pa. 1954. One copy free to each supervisory and teacher training office. 11 pages.

This is the script for a tape recording which teaches by dialogue the desired procedures to be used in organizing a local Young Farmers Association.

Suggested Facilities for a Multiple Teacher Department of Vocational Agriculture Class Rooms, Laboratories and Farm Mechanics Shop. Department of Agricultural Education Staff, Department of Agricultural Education, The Pennsylvania State University, State College, Pa. 1954. One copy free to each supervisory and teacher training office. 1 page.

This plan, as the title implies, is a suggested plan for multiple teacher departments. It is presented in quite fine detail and serves as a valuable guide for those who are planning departments of agriculture facilities.

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seven of twelve instances, but with none of the differences very large. In the comparisons between the groups of Agricultural Courses the vocational students showed slightly higher averages in nine of twelve instances.

It was concluded that no important differences existed between the scholastic achievements, in the College of Agriculture of the University of Maryland, between the students who pursued the curriculum of vocational agriculture in Maryland rural high schools and those who took some other curricula. While the non-vocational students scored slightly higher in most comparisons made between major groups of courses and sub-groups of Agricultural Courses, when intelligence scores were not taken into consideration, the vocational students scored higher than the non-vocational students in most comparisons made between students of near equal intelligence. It was further concluded that all other factors being equal, the vocational agriculture curriculum in Maryland high schools is equally as adequate as other high school curricula for preparing a student to take the courses required in the different curricula in the College of Agriculture at the University of Maryland. □

Revising Objectives - - -

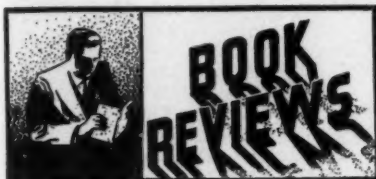
(Continued from page 19)

hard, production know-how, and farm skills are still needed, but knowledge of off-farm aspects is at least of equal importance in modern day agriculture. The increasing complexity of agriculture and its increasing dependency on the non-farm economy make it more difficult to enter and remain in farming.

Response from the head teacher-trainers in the nation's land grant colleges, Puerto Rico and Hawaii, as based on their reactions to the socio-economic trends in agriculture, indicates that consideration should be given to modifying the present objectives, and some suggestions are that the educational objectives in vocational agriculture should:

1. Continue to present establishment in farming as primary.
2. Be modified to include preparation for occupations related to farming.
3. Be modified to include guidance for those who may leave the farm to enter non-farm occupations.
4. Be modified to include training for those who are or who may become part-time or resident farmers.
5. Be modified to give more emphasis to training in farm mechanics.
6. Be modified to give more emphasis to training in the economic and management phases of agriculture.
7. Not be modified to include preparation for entering agricultural college.
8. Be modified to include training for

(Continued on page 23)



PLANT REGULATORS IN AGRICULTURE, edited by H. B. Tukey, pp. 269, illustrated, published by John Wiley and Sons, price \$5.50.

Seventeen specialists contributed to this book to present the many different uses of plant regulators. Introductory chapters in the publication include discussions of the principles of plant growth and how plant regulators act, and the chemical nature of plant regulators. Subsequent chapters discuss plant regulators in encouragement of roots, control of flowering and fruit setting, parthenocarp and fruit development, abscission, preventing pre-harvest drop, delaying foliation and blossoming, thinning blossoms and young fruit, maturing and ripening, inhibition of sprouting, plant breeding, weed control (in lawn, garden, orchard, nursery, field crops, and the Tropics), and vegetation control on non-crop land. The final chapter deals with equipment and methods for the application of plant regulators.

This book was not prepared for use by high school students in vocational agriculture. It was prepared to provide background material for those who wish to better understand how plant regulators work, and how they affect agriculture. Some parts of the book are, however, suitable for reference work in vocational agriculture. Much of the book would be of interest to teachers of vocational agriculture—the amount depending on the kind of farming in their area and their own interests. Of particular interest to all would be the chapters on weed control.

H. B. Tukey, editor, heads the Department of Horticulture at Michigan State College. He was formerly Chief in Research of the New York State Agricultural Experiment Station at Geneva and Professor of Pomology at Cornell University.

—A.H.K.

APPROVED PRACTICES IN SOIL CONSERVATION, by Albert B. Foster, illustrated, published in *The Interstate*, Danville, Illinois. Price \$2.00.

This is another in the growing series of "Approved Practices" publications of *The Interstate Printers and Publishers*. In this publication, the author has presented the techniques of planning, laying out, and applying many well-known soil conservation practices. Chapters are included on using land within its capability, rotating crops, engineering instruments for soil conservation, calculating run off from a watershed, grassed waterways and outlets, contour farming, contour fences strip cropping, terraces and diversions, farm ponds, sandblows, shelter belts, managing farm woodlands, managing land for wildlife,

improving and managing pastures and ranges, farm drainage, and conservation irrigation.

The appendix contains a chapter by chapter summary of approved practices in soil conservation and a glossary of soil and water conservation terms.

The publication is well illustrated with approximately two hundred figures, tables, and photographs. The line drawings illustrating construction methods are particularly good.

As the author indicated in his Foreword, it is difficult to condense into one book all the information needed to do the job of soil conservation. He has, however, done remarkably well. The step by step descriptions of procedures to follow in using the various soil conservation instruments and in the construction of major soil conservation practices should be particularly useful. The language and writing style used are such that the book can be easily read and understood by both high school students and adults. This book should be of considerable usefulness to all persons who are concerned with the practical application aspects of soil conservation.

The author, Albert B. Foster, is the head of a Field Information Unit of the Soil Conservation Service, United States Department of Agriculture. He taught vocational agriculture in Missouri for eight years before going to work for the Soil Conservation Service.

—A.H.K.

FARM MECHANICS TEXT AND HANDBOOK by Phipps, McColly, Scranton, and Cook, 752 pp., illustrated, published by *The Interstate*, Danville, Illinois. Price \$4.00.

This new edition of *Farm Mechanics Text and Handbook* will be welcomed by teachers of vocational agriculture, as well as by others who need a general reference book in farm mechanics.

The content of the book is organized around six major areas of instruction: farm shop work, farm power and machinery, farm buildings and conveniences, soil and water management, processing farm products, and rural electrification. There are a total of 51 chapters, including a chapter on providing and equipping a school-community cannery. Chapters have been added, or materially revised, on safety, the home farm shop, shop tools and equipment, painting, welding, sheet metal, farm machinery, farm wafer supply systems, fencing, farm wiring, motors, and erosion control.

Teachers will be interested in the organization of each chapter around the doing of important farm jobs. Important units are preceded by a list of typical problems and concerns of students to stimulate interest and to develop a "feeling of need." The steps in doing the various projects are usually itemized, and can easily be set up in "job sheet" form. A list of related readings is provided at the end of each chapter. The appendix includes suggestions to teachers and a suggested list of basic tools

Revising Objectives - - -

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those who would make desirable skilled farm laborers.

9. Not be modified to include training in general or non-vocational agriculture for non-farm youths and adults.
10. General or non-vocational agriculture training for non-farm persons should be provided in the secondary school, but such training should not be an objective of vocational agriculture.

The study also indicated that there is some difference in interpretation of the present educational objectives in vocational agriculture, particularly in the first objective to, "Make a beginning and advance in farming," which is often referred to synonymously as, "Establishment in farming."

Recommendations

Based on the findings of this study the following recommendations appear to be appropriate:

1. The present educational objectives in vocational agriculture should be modified or revised.
2. Further studies on objectives are needed on the state, regional and national level to consider modification of the present educational objectives in vocational agriculture.
3. In addition to modification of objectives there is need for clarification of the meaning of objectives. The matter of interpretation is perhaps as important as possible modification. The objectives must be clear to all if the oncoming generation is to be able to understand and preserve the basic intent of the retiring generation. The older teachers, supervisors, and teacher-trainers are acquainted with the genesis of the present objectives and are, therefore, able to "read into" the objectives areas, factors, and phases which, with the passage of time, are lost to succeeding generations in the field of agricultural education.

There must be a systematic and continuing transition in the educational objectives of vocational agriculture, as agriculture and the nation's economy undergo change and as generation succeeds generation in the field of agricultural education. □

and equipment for a farm mechanics shop.

The authors are L. J. Phipps, Associate Professor of Agricultural Education, University of Illinois; H. F. McColly, Professor of Agricultural Engineering, Michigan State College; L. L. Scranton, formerly Agricultural Education, North Dakota Agricultural College; and the late G. C. Cook, Agricultural Education, Michigan State College.

—A.H.K.

If your address has changed, be sure to notify Interstate Publishers and Printers, Danville, Illinois, of the change so that you will continue to receive your copy of the Magazine.

Stories In Pictures



Sweet corn produced and marketed cooperatively to the produce department of an Atlanta grocery chain is a new cash crop which Vo-Ag students at Grayson, Ga., have brought to their community. Lennis Etheridge dusts with DDT to control worms as L. J. Williams, Vo-Ag teacher, watches. A typical example of on-farm instruction.



Last minute instructions are being given to these Vo-Ag students who are fitting steers for the 1955 Junior Cow Palace at San Francisco. Instructor Jerry Davis and students are from Winters, California. This steer from the McClintch Angus ranch graded choice and sold for 25c per pound at the San Francisco show. The picture was furnished by Lawrence Joerger who was owner of the steer. Instruction of this kind must take place out on the farm.



The drought of 1954 came dangerously close to breaking Ernest Bruce's string of four years as a hundred bushels an acre corn grower, but the Pickens County (Ga.) Vo-Ag student improvised an irrigation system that saved the crop and helped him make approximately 150 bushels per acre on four acres. The pump was borrowed from a construction company; worn-out fire hose was obtained from the Jasper fire department, and the water was pumped from a stream paralleling the corn field. Helping Ernest get the pump into operation is his Vo-Ag teacher, J. A. Harris. Individual instruction is a necessity in vocational agriculture.

Ben Brown, publicity director, Holstein-Friesian Breeders' Ass'n., presents a model true-type Holstein cow to Raymond Covey, FFA Chapter President, Brattleboro, Vermont. Chapter members are collecting model true-types of all dairy breeds as aids in training for dairy judging. Burton W. Gregg is Chapter adviser. The National office of the Holstein Breeders' Ass'n. is located in Brattleboro.



Future Farmers attending the Ohio FFA Camp participate in the morning flag raising. This picture shows one end of the dining room which seats 400 persons.

Leesville Lake is one of the big attractions at the FFA Camp Muskingum in Ohio. Swimming instruction is provided under the leadership of two qualified Red Cross instructors. This camp has put in the swimming equipment shown as well as having added enough sand to maintain ideal swimming conditions.



